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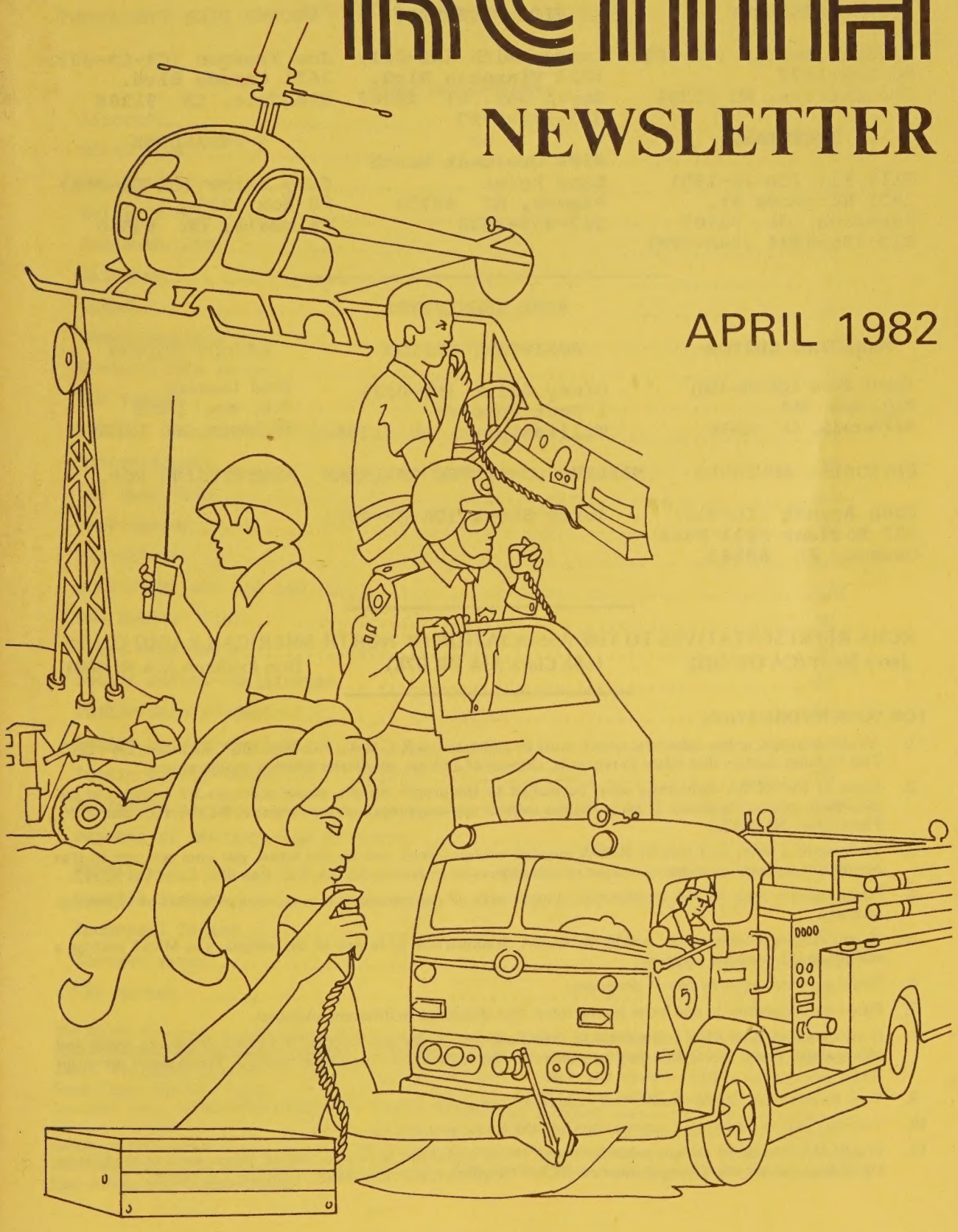
RCMA

NEWSLETTER

APRIL 1982



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OF MONITOR RADIO LISTENERS

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FOR YOUR INFORMATION:

1. All club business, unless otherwise noted, must be addressed to R.C.M.A., P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, newsletter delivery problems, etc.
2. Input to the RCMA Newsletter must be mailed to the proper editors, whose addresses are included in the individual column headlines. If no particular column seems appropriate, send input to RCMA, P.O. Box 1119, Flemington, NJ 08822.
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4. Please include your RCMA membership number with all correspondence to newsletter editors or club headquarters.
5. If you require a reply when writing to RCMA headquarters or to one of the editors, you MUST enclose a self-addressed, stamped envelope.
6. Please write on only one side of the paper.
7. Please don't combine in one letter several items that should go to different addresses.
8. If you want to type what you submit to the newsletter, please don't exceed a seven-inch column width and please single space. Doing this may save an editor from having to retype the material. Please don't use script type.
9. Your RCMA membership number and expiration date appear on your newsletter mailing label.
10. You may join or renew your membership for ONLY one year at a time.
11. The RCMA Newsletter accepts paid advertising. If you would like to place a paid ad, please write to the following address for our advertising guidelines: RCMA Newsletter, P.O. Box 4563, Anaheim, CA 92803.

RCMA NEWSLETTER
Issue 73 April 1982

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RCMA, P.O. Box 4563, Anaheim, CA 92803

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** Calendar **

Send notices of upcoming events for the Calandar section to John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803. Please send notices well in advance of the Newsletter deadline.

The R.C.M.A. supports scanning and scanner clubs. If your local R.C.M.A. scanner group is having a meeting, or if you are another radio club planning a meeting, send an announcement to the Calendar Editor and it will be sent to all members of R.C.M.A. Because of individual member requests and previous problems, the Board does not feel that sectional mailing lists should be distributed.

Greater L.A. Area R.C.M.A.

Board meetings are open to all members of R.C.M.A. They start at 7:30 PM, Now that we have separated labeling of the newsletter, the meetings will be devoted to R.C.M.A. policy and, of course, the latest scanner activities.

R.C.M.A. Working Sessions have been scheduled for the first Tuesday evening of each month. Any member of R.C.M.A. or visitor is welcome to attend and/or assist in the suffeling of papers and attempts to ascertain what went wrong with member X's subscription.

Greater L.A. Area R.C.M.A. David A. Heywood CALA001 Presiding

March 19 FRIDAY Meeting at Mercury Savings and Loan, Valley View and Lincoln, Buena Park, Ca 8:00PM. 2nd Floor. Elevator in back. Detail examination of two radio nets:
Rescue Coordination Center -- Rod Koral
Southern California Edison -- Gary Davis

April 16 FRIDAY Meeting at Mercury Savings and Loan, Valley View and Lincoln, Buena Park, Ca 8:00PM. 2nd Floor. Elevator in back. F.C.C. Microfiche demonstration. Your chance to fill those gaps on needed frequency information. (If you have a portable fische reader bring it to the meeting.)

R.C.M.A. Chicago

Contact Edward Robert Sirovy IL-004 312 969 2856
311 S. Williams Street, Westmont, Il 60559

Meetings: NANCINI'S Resturant 5555 St Charles Road, Berkeley, Il two blocks east of St Charles Road exit from Eisenhouer Expressway Extention I-290 (phone 312 544 7277)

April	24	1982	Saturday	1:00 PM
June	12	1982	Saturday	1:00 PM
July	31	1982	Saturday	1:00 PM
September	25	1982	Saturday	1:00 PM
November	13	1982	Saturday	1:00 PM

Possible picnic in late August and tours scheduled on short notice. A SASE on file assures notification of the extras.

R.C.M.A. member Ted Royster CASM006 reports he has obtained an antenna adapter for his BC100. It is a BNC to Bearcat 100 adapter and it appears to work. He obtained his adapter from Bennett Mobile Communications, PO Box 3105, Redwood City, CA 94064 (415) 593-6872

Another local member reports he has had luck with using a simple spade lug inserted between the antenna and the case in an attempt to improve low frequency pickups.

Calendar continued

R.C.M.A. Connecticut Chapter

Contact Bill Moore CT 038 203-223-0840
950 Farmington Ave, New Britain, CT 06051

Editors Note:

This month we have included another copy of

SCANNING DALLAS/FORT WORTH

The Dallas Fort Worth chapter of R.C.M.A. should be commended for their good work.

R.C.M.A. Dallas-Fort Worth

Contact Mike Pruden TX 072 metro 461 2602
Larry Van Horn TN 017 642 8407
David Coursey TX 107

Regular bi-monthly meetings are scheduled the second Saturday of each odd month Tenative location
Stoneridge Homeowner's Association Clubhouse
500 Grants Parkway, Arlington, Tx (SW of Arkansas and Collins)

March 13, 1982	7:00 PM
May 10, 1982	7:00 PM
July 10, 1982	7:00 PM
Sept 11, 1982	7:00 PM
Nov 14, 1982	7:00 PM

For latest information and newsletter send a stack of SASEs to
Scanning Dallas/FortWorth
1111 N. Carrier Parkway #B-107
Grand Prarie, Tx 75050

NEWSLETTER DEADLINES:

**** please note the newsletter deadlines refer to the month the newsletter is to be mailed --not the date on the cover. Information submitted by October 4 will be mailed to members in November. The November mailing carries a December cover date to assist USPS in their speedy delivery.

April	5	MONDAY	Newsletter deadline for "May" mailing.
May	10	MONDAY	Newsletter deadline for "June" mailing.
June	7	MONDAY	Newsletter deadline for "July" mailing.
July	5	MONDAY	Newsletter deadline for "August" mailing.
August	9	MONDAY	Newsletter deadline for "September" mailing.
September	6	MONDAY	Newsletter deadline for "October" mailing.
October	4	MONDAY	Newsletter deadline for "November" mailing.
November	8	MONDAY	Newsletter deadline for "December" mailing.
December	6	MONDAY	Newsletter deadline for "January" mailing.

Reports of Meetings and Officers

Welcome to yet another edition of the RCMA Newsletter. We've been able to obtain some results to our reader poll conducted a few months back. Advertising will be reinstated, probably in the May issue. Most members who wrote are happy with the quality of ads we have used and there have been few problems. Most seem to want the advertisers to print prices and so this will be done, if the advertiser chooses. Another question arose regarding the shortwave column, "Below 30 Mhz." The column will be staying in the Newsletter as we welcome Bob Horvitz as its editor. The coming months will see even more changes in the Newsletter as a number of new editorial staff positions are filled and new column editors selected. Look for a big change in the May Newsletter! We also have an Advertising Chairman. If you are interested in advertising in the RCMA Newsletter, contact Brad Leonard (MO-004), Box 13602, St. Louis, MO 63138. The new guidelines are printed in the centerfold portion of this issue and copies of the guidelines are being sent to all who have advertised in the Newsletter in the past year. If you would like to get your copy early, send a Self Addressed Stamped Envelope to Brad. We hope that some of the former advertisers will have ads ready for the May issue.

My mail continues to increase, and while I try to answer what I can, I just can't get to everyone. I apologize for this and wish I had the time to devote to our members' mail. If you have a problem, be sure to get in touch with one of us on the Board and if we can't help we'll try to route it to the person who can. Your patience is appreciated as is your continued support.

As we talk about handling mail I am writing this in early February. St. Louis has just dug out from its biggest snowstorm in over 50 years, and I was involved in Civil Defense activity that kept me at the Emergency Operations Center all of last week, 24 hours a day. While we helped emergency personnel get about through 4 wheel drive volunteers (the real heroes of the effort), another large share of credit is due the St. Louis Repeater Club, whose members manned the amateur equipment in the E.O.C. and provided personnel in key spots

throughout the County. Naturally, I brought along my Bearcat 210 which was invaluable in monitoring the efforts of the State Patrol, and local highway departments. It was quite an experience, and one I hope we don't have to repeat for another 50 years.
You may have noticed the dues increase. Unfortunate, but necessary. Eliminating advertising didn't cause it, although the paid advertising does increase revenue. The postal service continues to raise postage rates, and the cost of printing has also risen. This should be the last increase for awhile, at least I hope so. Our dues rates fall pretty much in line with that of the other ANARC clubs. But when you browse through one of our Newsletters, isn't it worth it? We are working on putting together another Social Members Directory. This is a directory of those members who want to correspond with one another on the various aspects of monitoring. More on this next month. Hope you enjoy this month's RCMA Newsletter!

SCANNING

Dallas/Fort Worth

January 1, 1982, Issue Three
Published by the Dallas/Fort Worth Chapter of the Radio Communications Monitoring Association, 1111 North Carrier Parkway, Grand Prarie, Texas 75050. David Coursey, Editor. APT. B-107

MEETING NOTICE

The regular January meeting of the DFW/RCMA will be held THIS SATURDAY NIGHT, January 9th at 7:00PM. The program will be presented by Doug Loughmiller, K05I, who will be down from Paris to demonstrate the OSCAR satellite system. Larry Van Horn will also present a program on monitoring commercial and governmental satellites.

David Coursey will pass around his (partially) working BC-100. And we'll have our regular, "Let Me Speak to the Scanner Freak," question and answer session.

The meeting will be held at 500 Grants Parkway in Arlington. For more information or directions, call Mike Pruden, meeting coordinator, at Metro 461-2602. Friends and visitors welcome.

MUTUAL AID: A SYSTEM THAT WORKED

At 7:23PM on December 7th, Plano firefighters responded to a "gasoline tanker truck, fully involved" on the driveway of a Gulf service station at Parker Road and U.S. 75. Enroute, with heavy dark petrochemical smoke visible, a second alarm was added.

By the time the truck literally burned itself out five hours later, taking with it two vehicles and part of the service station, more than 100 firefighters from six cities had been involved. Additionally, Plano Chief Lee Mayfield special-called off-duty personnel to work at the incident scene and to help with mop-up.

On the law enforcement and crowd control side, Plano officers, both on-duty and off responded to the scene along with every available patrol squad from the Collin County sheriff's department. Additionally, other Plano city workers responded to the scene with heavy equipment to dike the fuel laden runoff water.

As an observer at the scene, I was struck by the fact that by comparison with other recent mutual aid situations (the International Paper Company fire in Carrollton, for example) that inter- and intraagency communications were handled remarkably well. There are at least three reasons for this: Collin County is a mutual aid fire channel, preplanning, and the basically rural nature of the county itself.

The county mutual aid fire frequency is 37.180 simplex. This is the frequency used by the old state sheriff's net before the high-band intercity system came into use. Around the state, especially in rural areas, the channel has been converted over to fire use (Collin County, Hutchins, etc.) or has become a sort of low-band intercom frequency for use between agencies (Grayson County area).

In Collin County, 37.180 is in frequent day-to-day use. McKinney uses it as the city fire and EMS channel (700's series), and both Frisco and Wylie fire and EMS can be heard there as well. Plano F.D. and EMS are based on 46.340 simplex, but the Plano dispatcher has 37.180 as well.

At the scene, most communications were conducted by Pland F.D. on their own frequency. Thanks to the small size of the area of operations (about the size of a football field) most everyond has visual contact with each other and it was a fairly simple matter for the fireground commander to move around from one side to another. Most communications involving non-Plano personnel at the scene were carried on in person.

Besides the usual communications logjam that exists between most police and fire dispatchers, the only agency having probelms was Richardson. R.F.D. is on 453.325 (RO) and is not part of the 37.180 system. Thus, it appeared that the R.F.D. and P.F.D. dispatchers were exchanging information over the phone when required.

Most impressive, was the ease with which fill-in's were handled. During the course of the incident, several departments provided companies to stand-by at the (empty) Plano stations. All the fill-in companies were equipped with 37.180, as were all the bases involved. Thus, the fill-in's could talk to each other, their own bases, each other's bases and to the Plano dispatcher as well. Fortunately, the stand-by companies were not required to answer any incidents during this time, but if they had coordination would have been simple.

As and example of how the system works on a daily basis: during the time the tanker was burning, McKinney answered an EMS call in their city. The patient was critically ill and was being transported to Methodist-Central in Dallas. As the ambulance left McKinney, the Plano dispatcher provided communications services to the unit. Which still, by the way, leaves several questions---like, where was the CareFlite helicopter? Who did they talk to after leaving Plano's radio range? Why all the way to Meth-Central? Oh, well, never mind!

On the police side, the Collin County S.O. operates what amounts to a countywide repeater on 155.610 (RO). Plano operates several repeater and simplex channels on 453 Mhz. However, Plano supervisor's cars are equipped with VHF as well as UHF radios. Thus, the Plano supervisors were able to discuss the situation with the Collin County units and has access to the intercity system as well. It also appeared as though some Plano UHF portables were assigned to county units during the incident.

(This is the first in an occasional series by David Coursey detailing system operations during major incidents around North Texas.)

HAM SATELLITES IN ORBIT

(Ed's Note: This article, by Larry Van Horn details some of what will be discussed at this month's meeting. As our membership expands its interests, SD/FW will expand our coverage into specialized communications. When necessary, we intend to add extra pages to keep up with late-breaking information.)

When most of us think about monitoring earth satellites, we usually think about the ATS series, the Fleet SatComs or Weather satellites. Typically, the specialized converters, antennas and other equipment needed to hear there birds are beyond the income or interest of most of us.

There are, however, several satellites that are very easily heard on equipment which many of us already own! Yet, chances are, you didn't even know they exist. These are the satellites of the OSCAR and Radio Sputnik series.

AMSAT is financed by private contributions and, consequently, the cost of an AMSAT launch is much lower than its commerical counterparts. Once in orbit, the satellites basically act as repeater/translators in the 2 meter, 10 meter and 435-436 Mhz. ham bands.

Byway of history, the first OSCAR was launched on December 12th, 1961 at 12:24 PM PST when a Thor-Agena rocket lifted off at Vandenberg AFB in California. The rocket carried the Discoverer-36 satellite as its payload and OSCAR-1 as ballast. This first OSCAR carried a .10 watt transponder which transmitted telemetry back to Earth for three weeks. Since that time, eight additional OSCARS have been put into orbit, each one more advanced than the ones previously. At present, OSCARS 8 and 9 are circling the globe, providing amateurs worldwide with countless daily communications opportunities.

The Radio Sputnik series are produced by the Soviet counterpart to AMSAT. On October 26th, 1978, the Soviets launched RS 1 and 2 as additional payloads on the launch of Cosmos-1045. While these vehicles are now silent, they provided amateurs with new opportunities for satellite communications.

On December 17th, 1981, the Soviets set a record of sorts by launching six amateur satellites off the same booster rocket. As of this writing, the satellites are still undergoing stablization and testing. Once they are in stable orbits, the 145-146 Mhz. to 29.360 to 29.500 Mhz. translators/repeaters will be activated and available for general amateur use.

IN OTHER SATELLITE NEWS: TYRO earth station owners will soon have a new satellite available. RCA SatCom 3-R was launched November 19th, 1981 to replace the original SatCom 3 which disappeared (was lost in space) in December, 1979. This bird will be activated this month for television operation. No word on channel usage as of yet. SatCom 3-R is in geostationary orbit at 132 degrees West Longitude. Life expectancy is ten years.
The Soviets are on the verge of breaking their own record for launching the most vehicles into space in a single year. The current record is 99, but as of mid-December they had launched 98 vehicles during 1981. Most of these were in the Cosmos series (no relation to Carl Sagan), which includes communications, recon, military, spy and killer satellites. It has been estimated that the Soviets make four to five times as many launches as the U.S., but thanks to technological superiority, the U.S. gets more use from the smaller number of payloads.

Our January meeting will be a great one and I look forward to seeing all of you there. Be sure to bring paper and pens, because a great deal of information will be presented. Doug Loughmiller, KO5I, will be down from Paris. Doug is a regional AMSAT rep and will bring a slide presentation with him. Hopefully, we'll be able to demonstrate the system as well.

I'll present a program on commercial satellites and talk about how you can hear them on your present equipment.

(Larry Van Horn is the administrator of DFW/RCMA and technical editor of SD/FW.)

DECODE MY DREAMS

You may have wondered how the news media and fire buffs get word of major fires. Well, it's exactly the same way the stations do---off the radio. And in place of the expensive station radios, scanner operators use decoders.

In its simplest form, the decoder "listens" for the "all-call" tone transmitted before all multi-alarm fires (and during the 6:30AM, Noon and 6pm speaker tests) to alert the stations. When the decoder "hears" the tone, it opens the scanner speaker, awakens the listener, and the rest is history.

Now comes the computer age, and with it fire buff, media-type and inventor Lyn Kennedy. Using a ROM chip, Lyn has designed a new generation of decoder which will, in addition to decoding the all-call tone, use the new digital dispatching system to provide several other functions. The new decoder can be programmed to decode any of the stations, or combination of statiions, that are transmited. Thus, it may soon be possible to set a decoder to alert you both for multi-alarms and for boxes transmited near your home.

We're hoping Lyn Kennedy will come to our next meeting. David Coursey will have his there for a demonstration.

MORE BAD NEWS

Addenda to the December SD/FW DC-100 Review: The two radios we sent back to Bearcat have been replaced. One works fine. The other was specially retuned for us and bench tested by Bearcat. It was inadvertently left with a UHF RF rection tuned "too hot" for use in a metro area. Next Monday the radio will go back for a retune. In the June issue, Larry Van Horn will re-review our radio after six months of use.

TIDBITS AND OUTRAGES---Larry Van Horn called the other day to make sure we thanked all the members who have sent in contributions to our treasury. However, Larry says some of you will receive your checks back---since the chapter, as of yet, does not have enough money to open a back account---all checks need to be made out to "DFW/RCMA C/O LARRY VAN HORN." That brings up this subject: This chapter is currently running on these mailed-in contributions, the kitty at the meeting has been about covering expenses at the meetings themselves. If you like SD/FW, keep the SASE's (remember?) and $$$ coming in...A big DFW/RCMA and SD/FW welcome to ROBERT HORVITZ the national bulletin's new SW utility editor. Robert lives in Providence and also writes radio for "The Next Whole Earth Catalog" and its magazine "CoEvolution Quarterly"...The chapter has two new books, FCC RULES AND REGULATIONS for the UHF and VHF services. If you need them, call Larry....Speaking of LARRY VAN HORN (Who us? Again? So soon?) he has yet to hear about his application for the national Satellite editorship. Seems big RCMA is having some editorial problems. And on that topic...If you missed your DECEMBER RCMA BULLETIN, well, you're not alone (some consolation, huh?) Seems a bunch of bulletins disappeared or something. Anyway, the club promises to make good...Special thanks to SCOTT MARTIN, dispatch coordinator at CareFlite (462.975 [RO]) who has provided much of the information for the "EMS FREQUENCIES IN NORTH TEXAS" artilce that will be featured spread over the February and March issues. SCOTT will share his expertise as speaker at our MARCH MEETING. Coming in SD/FW: In addition to the EMS list, a Dallas S.O. call numbers list, a RACE's ham repeater list and information on SKYWARN school. If your interested in receiving RED CROSS training, contact JOHN MONTGOMERY, 559-2137, was recently named training chief for the Dallas County chapter of ARC.

SHORT SUBJECT

From: City of Dallas, Master Emergency Operations Plan, Volume 5---Enemy Attack Disaster Plans, Subplan 5-A---Public Warning:

"Effectiveness of the background music system used during the ATTACK WARNING is a joint responsibility of the Emergency Preparedness Coordinator and the participating private enterprises."

And you thought nuclear holocaust was a dry subject? Imagine, music to watch the end of the world by.

DALLAS FIRE DEPARTMENT NEWS MEDIA ASSISTANCE
December 30, 1981

CURRENT FIRE EMERGENCIES:

a. Monitor Dallas Fire Department radio frequencies for initial assignment of equipment:
   460.575 MHz--used to dispatch both fire apparatus and mobile intensive care units which are in a fire station at the time of the alarm.
   153.890 MHz--used to communicate with fire equipment away from a station. For equipment away from a station, the initial assignment will be made by transmitting an alerting tone and stating the address and nature of the alarm. Confirmation that an apparatus is en route will be obtained by the apparatus stating the assigned address. If the assignment is to a one-alarm fire, the Communications dispatcher will so state before checking the responding units. The principal communications from an emergency scene will occur on this frequency.
   154.130 MHz--used to communicate with mobile intensive care units (ambulances).
   154.160 MHz--used for short-range communications with walkie-talkies at multiple-alarm fires and in high-rise buildings.
   154.415 MHz--used for supplemental communications, including simultaneous transmission of announcements over the City of Dallas news service (subscription telephone circuit).
b. Monitor the City of Dallas news service (hot-line telephone circuit to subscribing news organizations) for announcements of multiple-alarm fires and other emergencies in which the Fire Department is the City of Dallas lead agency. This announcement will simply be an alert that an emergency exists at a specific address. Details are unavailable at the time of this announcement.

FOLLOW-UPS ON FIRE EMERGENCIES:

a. Monitor the City of Dallas news service broadcast or 154.415 MHz for summary reporting on the emergency. Information normally provided by this broadcast is the nature and scope of the emergency, exact address, type of occupancy, preliminary cause (if available), preliminary damage estimate, injuries to citizens or firefighters, times of the alarms, and number of fire apparatus and personnel responding. Confirmed cause typically is unavailable for several days pending full investigation and interview of witnesses.
b. For news media representatives at an emergency scene, go the the Fire Department command post, which at multiple-alarm fires will the the deputy chief's car or command van. As information becomes available, details will be provided by a chief officer, an investigator, or Community Relations staff member.
c. Call 670-5214 or 670-4315, Community Relations office, weekdays 8 a.m. to 5 p.m. This office will provide information similar to that broadcast on the City of Dallas news service and will accept requests for specific information.
d. Call [redacted], Arson and Fire Investigation Division, on nights, weekends, and holidays. This telephone is answered when an investigator is present in the office. The investigator will normally be able to provide information about an emergency which has occurred since the previous administrative workday. An alternate means of contacting an investigator is to call [redacted] and request that you call be returned. The reply will occur as the investigator's workload permits.
e. Call [redacted], Communications Division, staffed continuously. Dispatchers who answer this telephone have no information beyond that broadcast in communications with responding apparatus or on the City of Dallas news service initial announcement. Details of fire cause, injuries, and damage assessment will not be available from the Communications Division. Further, the same persons answering this telephone answer emergency calls from the public; thus, the dispatcher will break the conversation when an emergency call is incoming.

OTHER INFORMATION REQUESTS:

Call 670-5214 or 670-4315, Community Relations, weekdays 8 a.m. to 5 p.m. This office will accept requests for information on Fire Department activities and will arrange for interviews with Department officials.

DO NOT CALL:

a. 744-4444, unless you are requesting an emergency fire, medical, or police response.
b. Other Fire Department administrative numbers when you are seeking news media assistance; use the services explained above.

INTERPRETATION OF FIRE DEPARTMENT RADIO MESSAGES:

a. One-alarm fire. A fire reported in a building; minimum response is two engines, a truck, and a battalion chief.
b. Signal 2-11. Two-alarm fire with an additional minimum response of three engines, a truck, a battalion chief, and a deputy chief. Further multiple alarms are designated by Signal 3-11, Signal 4-11, and Signal 5-11 as the severity increases.
c. Signal 1-1. Fire is under control.
d. Signal 6-6. All companies assigned to the fire are clear for other assignments.
e. Signal 27. A message from the police communications series indicating a deceased person.
f. Alert I or Alert II. Airport emergency at either Love Field or Red Bird, as stated. Alert I means an actual emergency exists; Alert II means a standby for a potential emergency.
g. 700-series radio calls. Emergency medical service vehicles, including Mobile Intensive Care Units and EMS supervisors.
h. Apparatus designations. Engine--carries water and can pump water from a fire plug at high pressure. Truck--aerial ladder or snorkel apparatus which can direct a water stream from the top of the raised ladder or can provide access to upper stories of a building. Squad--vehicle for transporting additional firefighters beyond those riding other apparatus. Chief--an on-scene supervisor at an emergency.

TARRANT COUNTY FIRE DEPARTMENTS

Provided by Mike Pruden.

Fort Worth

Alarm Channel---154.250
Channel 1---460.525 All in-service companies not responding to fires (on inspections, returning from fires, etc.) and training.
Channel 2---460.550 Primary Response and Fireground Channel.
Channel 3---460.600 Secondary Response Channel, also used as a mobile-to-mobile and mobile-to-base channel for conversations.
Channel 4---460.625 City Pagers. Fire Administration and Fire Prevention.

Apparatus in Fort Worth is numbered by the type of apparatus and station number. District chiefs respond to all structure fires.

Chief of Department---C-1
Dep. Ch., Emergency Operations---C-2
Dep. Ch., Inspection/Education---C-3
Dep. Ch., Service Division---C-4

Assistant Fire Marshal---Marshal 2
Fire Investigators---Marshal 3-8
Public Information Officers---91 (Roy Knight) 92-95
Communications Shift Supervisors---71, 72, 73
Training Division---Trainer 1-7
Supply Section---Supply 1, 2

Tarrant County

Mutual Aid System

46.060 County-wide mutual aid frequency
46.080 Northeast
46.240 Northwest/Southwest
46.260 Southeast
46.480 Unknown
154.190 County Fire Marshal's Office

Some small departments conduct all their operations solely on the county channel(s). Others have their own channel to dispatch and/or respond on and use the county frequencies for backup. When monitoring a fire in rural Tarrant County, it is suggested that you also monitor the mutual aid channel for that area. However, some of the operations on these channels seem to be fairly low powered, although they would be expected to be widely heard.

TARRANT COUNTY FIRE DEPARTMENTS

ARLINGTON---482.4125 (RO) Dispatch, 482.4375 (RO)
BEDFORD---153.860 Dispatch
BENBROOK---154.190 (?)
BURLESON--46.100 Dispatch (Cleburne here also)
EAGLE MOUNTAIN F.D.---46.060, 46.240
EDGECLIFF VILLAGE---46.060, 46.240, 46.260
EULESS---46.140 Dispatch
EVERMAN---46.260 Dispatch
FOREST HILLS---46.160 Dispatch
GRAPEVINE---45.280 Dispatch (Other city departments here as well)
HALTOM CITY---46.120 Dispatch
HURST---46.320 Dispatch
KENNEDALE---46.060, 46.260
LAKE WORTH VFD---46.060, 46.240
NORTH RICHLAND HILLS---46.280 Dispatch
RICHLAND HILLS---46.220
RIVER OAKS---460.600, 46.240
SAGINAW---46.060, 46.240
SANSOM PARK---46.060, 46.240
WHITE SETTLEMENT---46.060

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

NEWS HIGHLIGHTS

ANARC is a federation of the most responsible, well established radio listening clubs in North America. RCMA attained Full Member status in ANARC in 1977. For a list of the ANARC Member and Associate Member clubs, send a self-addressed, stamped business size envelope with your request to the address below.

For an annual subscription to the ANARC Newsletter, send $5 to Joe Barr, 1500 Bunbury Drive, Whittier, CA 90601. ($8 overseas subscription)

ANARC 1982 CONVENTION JULY 23,24,25 MONTREAL, CANADA

Meeting to be held in the vast studio complex of Maison de Radio Canada. Convention hotel is the Holliday Inn at the Place Du Puis.

Registration information will follow soon in this article or you may Send a Self Addressed Stamped Envelope (SASE) to

Jeff White ANARC
409 Laconia Lane
Schaumburg, Il 60193

ANARC is suspending St. Louis International DXers (SLIDX) 9720 Vickie Place, St. Louis, MO 63136 at this time pending evaluation of the several member complaints and lack of activity of the group. SLIDX has been deleted from the latest ANARC club list.

THREE CLUBS MERGE. The Alantic States DX Assoication (ASDA), The Southern DX Association (SDXA) and The Association of Illinois DXers (AIDX) have merged into a new club. The United States DX Association (USDXA). Membership fee for USDXA is $8.50 for North America, $9.50 Worldwide by surface mail. $14.00 Worldwide by airmail. Address P.O. Box 888653 Atlanta, GA 30338. Sample copies of newsletters available for $0.50.

ANARC Newsletter publishing schedule has slipped a bit and arriving about the time we are at the printers, but some comments are still timely. From the January issue.

Monitoring Times. (Published by our Federal Editor.) Free copy available write Grove Enterprises, Brasstown, NC 28902.

International DXers Club of San Diego (SDDXC) Consentrates on reviews of radio equipment. Their newsletter is starting to cover scanners. They have their 1981 Shortwave Hobby Equipment Review ready 179 pages. Contact International DXers Club of San Diego, 1826 Cypress St, San Diego, CA 92154 for more information (Send a SASE). We have been receiving copies of their newsletter and it is most interesting.

Comments on last months section of ANARC news.

We are sorry to hear that Radio West has hit some troubled times. Grant Manning of Radio West is assessing the situtation and we hope he is soon back in business again. Grant Manning is one of the nicest people we know and a most competent technician.

Century Print Shop, 6059 Essex St, Riverside, Ca 92504, does indeed have complete sets of 1981 Police Calls available at quite a discount. While the 1982 editions are on the way, these are band new, never been used and at a substantial discount. Write for a quote. Send a SASE.

Aircraft

Maj. Ron Hammer, Editor

Send private, commercial, firefighting and law enforcement aircraft frequencies of interest in the 108-136 MHz range and frequencies in other bands above 30 MHz associated with airports and aircraft plus questions, articles and tips related to aircraft monitoring to: Major Ron Hammer, 821 Elisa Way, Roseville, CA 95678.

As I pecked out my last missive for this column I mentioned that the ol' "crick" was rising. Little did I know what fun was yet to come! By midnight it had encircled the house and was flowing past in the gutter. By 2:30 AM it filled the street. By 4:30 am it was a rather ugly, rushing torrent. My wife was terrified and I kept thinking, "I don't think my new water alarms are going to do any thing to stop this!" Well, I had better fortune than the people just down the block--it crested out just inches below the level of my family room (slab) floor. Really close! Someone left their boat tied to a tree in my front yard. Since I quit flying, radios have been just play-toys for me, but that night I sure stayed glued to my Radio Shack "Weatheradio" on 162.4 MHz. All the mass-media reports concentrated on the larger urban areas. I wanted an idea of what I could expect to happen/continue in Roseville! This I was able to interpret from the National Weather Service broadcasts--which are, of course, continuous. Nothing is more distressing than to be in danger of sinking from sight and turn on the battery powered TV and get nothing but "Gilligan's Island". Anyway, the fourth of January was not a good day for us.

Another dark day for some came on 18 January 1982 when we learned of the deaths of the four Air Force Thunderbird pilots. Those guys are really the cream of the crop. The whole Air Force is one big sorting process--who gets into pilot training, who makes it through, who flys fighters or T-29's, etc. If you are flying SR-71's or are a Thunderbird you have really been sorted over. I was greatly honored to have a pilot-training classmate of mine (Michael Miller, Cl. '58-O) become a Thunderbird. I think he retired a full Colonel. It is a real tradgedy to lose four of the best this country can offer. That's the airplane business, though. That's the price someone must pay for those who wear those shiny pilot wings. When someone went in in Southeast Asia it always made you kind of sick to hear (or say) the terse words--"No 'chute, no beeper." I always thought, "Well, I could have stayed home and worked at the plywood mill like my Mom wanted me to do." (I could also have gotten run over by a logging truck, too.)

While no consolation to the family and friends of the dead pilots, that same day, here in Roseville, a new human being came into the world. My granddaughter, one Jessica Danielle Myers, in fine health. I became more emotionally involved than I had thought. We got to hold her about 12 minutes after she was born. You look at that little face and wonder--if she lived to be 100 where would she be, what would she have done and what would be the memories of these days. Maybe someday she'll be a Thunderbird pilot. Probably not, but who knows. It's the "maybes" that make the hair on the back of your neck tingle. Yeah, I'm a proud grandpa like all the rest of the old fogeys. Being only 45, though, I'd have time to be a great-great-grandpa. Now that is a mind boggler. (Ha)

Hey, speaking of catalogs to send away for (?) when's the last time you guys sent away for your EDMUND SCIENTIFIC CO. catalog? (101 East Glouchester Pike, Barrington, NJ 08007) As always, they have 116 pages of all kinds of toys for kids 10 to 90 (give or take a few years). Their '82 Spring/Summer catalog ought to be out by now.

If you can read English and like books about things be sure and write to Donald Erickson's CENTURY PRINT SHOP (6059 Essex Street, Riverside, CA 92504-1599)

and get his extensive book list and discount price sheet. He really has a lot of radio and electronics books including the complete offerings of many specialty publishers. Do send along a stamped (37¢), self-addressed envelope and you'll get a worthwhile freebee list. Don's number is (714) 687-5910. He's not a big corporation, but a fellow hobbyist trying to run a business that caters to radio interests. He discounts where he can, so give him a try.

Sort of a flying story: In early January (against my better judgement) I flew up home to visit my Mother for a few days (Sacramento to Portland and back). The weather was really crummy--fog, low ceilings, ice--all the stuff that keeps flying from being a totally enjoyable career. Anyway, the flight back was delayed considerably. We finally got off just minutes before the end of the great Dallas Cowboys-S. F. '49ers playoff game. About gear-up tne pilot comes on the loudspeaker and says, "Sorry to tell you this folks, but it looks like the '49ers have had it." About level-off he comes on again and says, "You won't believe this, the '49ers have scored!" and the whole plane full of people cheer and jump around (in their seatbelts, of course). A guy next to me stops clapping for a minute and looks over and says, "Hey--I wonder who's flying the plane!" Anyway, everyone out here is happy to have San Francisco noted for something besides cable cars and... The '49ers' Danny Bunz is from right here in little ol' Roseville. Everybody in town seems to know him except me. After the Superbowl they, of course, had Danny Bunz days here. The '49ers train about 7 miles north of here at Sierra College in Rocklin.

Another radio/flying/football TRUE story: Back on 16/17 January 1967 (as verified by my flight log) I was the Aircraft Commander on C-130 40524 flying from Wake Island to Kadena AB, Okinawa (about a 9½ hour jaunt in the Herky). That was the day of the very first Superbowl back in the states--Greenbay vs. Kansas City. Now the navigator--who's name now escapes me--was a sporting man. He spent about half the trip fooling with the HF radio and finally got either some short snatches of the game being direct-broadcast on shortwave somewhere or a newscast of the score or whatever. Anyway, when we landed in Okinawa it was early morning so we went over to the stag-bar for a "breakfast" of sorts. The ol' Nav runs around placing bets with everyone in sight on the game,safe in the knowledge that no one there knows the game is even over yet. (Some of them had probably not even heard of a "Superbowl".) I had to admire the guy — I just stayed away from him in case some Camp Smedley D. Butler marine Lieutenant figured out his scam! Troop Carrier crews never were to be trusted. (The ol' log reflects that the next day and the rest of that week we were into Da Nang, Tan Son Nhut, and Cam Ranh Bay, Republic of Vietnam,hauling loads of 155m/m artillery shells. A little over a year later I was back flying the "Oscar Duece" (O-2A) on the Ho Chi Minh Trail. We didn't listen to much football out there.)

Bob Horvitz (CT-048), our "Below 30 MHz" editor sends along a letter I think I'll just reproduce for those who might have inquiries concerning who a certain tail number/I.D. might belong to.

Bob Grove sends along a flyer on a new doomaflitchy he has out now called the "SCANVERTER" for 225-400 MHz reception. As I have made so much noise about this band in the past, I believe it to be newsworthy to reproduce Bob's blurb on the new device of direct interest to the aviation band enthusiast. I am not recommending it--in fact I have no idea how it even works. I believe there is precedence for running copy on newly released contrivances of immediate interest to the readership.

Bill Farmer (CAVE-010) from Thousand Oaks, CA sends along a clipping out of the January 25, 1982 Los Angeles Times entitled: "Dial 'E' for Earth--Airlines Will Offer Phone Service. This article (which I will attempt to include at the end of this column) notes the new service will be in the 900 MHz band,which is different than the service reported on in the past few issues. I have coffee every morning with a co-worker and a couple of "super-foxes" down at the County. When I was enroute to Portland during that coffee-break time I thought how much fun that it would be to call the cashier's phone right by where they sit and surprise them. But, alas, I also thought--how am I going to justify that expense to my wife. I get in enough trouble about my secretary!

John Coleman, Jr. (PA-131) from Monessen, PA send an interesting packet of materials on the Air Florida tradgedy. Included is some tech data on the fat little Boeing 737's in all of their variations. The USAF T-43 navigator trainer is the same plane. (Unfortunately, the copy is so small and light it will just not reproduce again in this publication.) I've never flown one, but I've flown airplanes in the artic and know what ice on the wings can do. I've worked up an honest sweat in a parka and bunny suit chipping ice off of the wings of a KC-97 with the edge of a clipboard. With a 141 foot wingspan, that's a lot of chipping. It's a sickening feeling when a big airplane quits flying and drops out of the sky. I broke the nose gear on a C-130 dropping it in in a full-stall on an assualt landing experiment one time. Everyone walked away from it, but we did have to take a bus home from the mission--sort of embarrasing. I've said it here before, when you rotate that nose and pull'er off--that is the moment of truth. You've put your trust in a lot of things--not the least of which is your own recent judgement.

On a lighter note John monitors the radiotelephones on 454.800 and 459.800 and reports hearing some VIP raising hell because someone stole the booze out of his refrigerator. Then he ordered a steak for himself and candy for his pilot as the poor guy was going to be so busy refueling he wouldn't have time to eat. Yeah, I've flown a few VIP's. He's lucky he got the candy! John sends a bunch of Washington, DC area charts--which, unfortunately just won't reproduce well enough.

Finally, beings no one sent in any extensive frequency lists to print, I'll run a letter from Robert A. Coburn that sums up a whole bunch of stuff on the UHF band.

Hey, if you're into sex, violence and Burt Reynolds humor, "Sharky's Machine" is the movie for you. Not much radio, but lots of girls and .45's. It has been rated on a par with my hero, Clint Eastwood's "Dirty Harry"movies. I gotta like Burt Reynolds, man--he's my age!

P. S.: Too late to publish--Rod Bourne (VA-012) from Washington, DC sends a whole packet of stuff on ARINC. Thanks, Rod. We'll try to get some of it in in the next issue. (At least the California stuff, huh?) Ha

Dear Major Hammer:

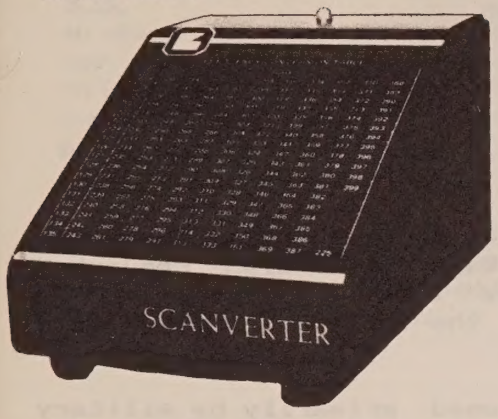
Here's a copy of the "Below 30 MHz" column for the "March" RCMA Newsletter. Thought it might interest you.

Also, a regular contributor to the HF column before I inherited it, Al Ricciuto (NY-150), 24 Marlow St., Rochester, NY 14611, sends an offer I think should be published in your column instead of mine: "My specialty in utilities is the Aero. I have at my disposal the complete "US Registry of Civil Aircraft" on microfiche, and in next few weeks will also have the complete Reg. of all Canadian planes. I will gladly look up for any member of RCMA who has unID tail # if they send me the complete tail # along with a SASE. This is in regards to any US or Canadian (CF and CG series they use). On VHF, all ATC uses tail # to ID planes. They usually use the complete tail # when making contact with approach tower (ex: N-4256-J; after that they only use '56-J). So to ID it right a complete tail # is needed. I am in hopes that you will be able to find a little space in your ute section to mention this aid to members if they would like it."

Yours truly,

BOB

"Below 30 MHz" editor, RCMA (CT -048)



GROVE ENTERPRISES, INC.

BRASSTOWN, NORTH CAROLINA 28902

SCANVERTER IS READY!

225-400 MHz on *YOUR AIRCRAFT SCANNER!*

Delivery: March, 1982

Hear military air tactical communications, Coast Guard search and rescue missions, federal government agencies in flight, Space Shuttle in-range communications, Navy and Air Force aircraft and satellite transmissions and more!

By "bandstacking" -- an exclusive Grove Enterprises concept -- the entire 225-400 MHz band is divided into ten 18-MHz wide aircraft band on your 118-136 MHz scanner. Frequency conversion is simple; a convenient look-up chart is printed on the Scanverter front panel.

While ten different UHF frequencies are receivable on each VHF channel, a good directory of UHF frequencies (such as our popular Federal Frequency Directory) will help you determine which frequencies are most likely to be active in your area.

Scanverter connects between your outside antenna and your scanner and requires 12 VDC power (AC adaptor available). No adjustments are necessary; everything is automatic.

Additional features include:

High sensitiv ty, low noise microstripline design
All metal cabinet for superior shielding
Double balanced mixer for reduced spurs and images
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Zener-regulated crystal oscillator for high stability

But the initial production run is limited to 100 units, not enough to satisfy the overwhelming interest in this unique instrument. To be assured of prompt shipment, ORDER NOW! 1-800-438-8155

continued

ROBERT A. COBURN
RFD - 4, 4 TINKHAM LANE
LONDONDERRY, NEW HAMPSHIRE 03053
603-432-2988

Dear Aircraft Monitor:

Many of you have written for information on equipment available for monitoring the UHF Aircraft Band and also requested information. Due to time limitations I have not been able to answer all your questions. Hopefully the following letter will answer most of the questions received.

First--The 225 to 400 Mc range is used primarily by military aircraft. Generally the stations are found on 100 Kc increments for example(311.0 , 311.1 , 311.2).However some stations are now operating on 50 kc increments (311.05 ,311.15 , 311.25). Most stations operate on AM like on the 108 to 136 Mc range. A good publication to determine the usuage in your area is AIR SCAN DIRECTORY of AERO BAND SCANNER FREQUENCIES, by Tom Kneitel,it may be purchased from CRB Research, P.O. Box -56, Commack NY 11725 for $7.95 plus $1 for first class mail. Also there is the IFR Supplement-United States issued every eight weeks by the Defense Mapping Agency Aerospace Center,St. Louis Air Force Station, Missouri 63118,contact them for current prices. the FEDERAL FREQUENCY DIRECTORY,by Bob Grove,also includes the UHF Aircraft Frequencies and may be purchased from Grove Enterprises Inc.,RT-1 Box 156,Basstown,N.C. 28902 at a cost of $14.95 plus $2 shipping.

Presently there are some publications that include information on the Aircraft band. RCMA News Letter,P.O. Box-4563,Anaheim,CA 92803,membership $12.00 a year. Also S-9 Magazine,14 Vanderventer Ave,Port Washington,N.Y. 11050 includes frequent articles on the Aircraft band, yearly subscription is $12 a year. SPEEDX, P.O. Box - E, Lake Elsinore, CA 92330 includes some information on the low frequency aircraft band. The cost of membership is $16.00 per year.

Second--The range of your reception will be determined by any of the following factors: Height of the Aircraft, Location, Transmitter Power, Antenna, and Distance from the Ground Station. Also your receiving station has a great influence on your ability to receive UHF signals. Your Antenna, type of lead in used, sensitivity of your receiver(which may be improved by a pre-amp), and your distance from the ground station.

Third--You may receive the UHF Aircraft band by using a tunable receiver like the URR-35, CEI-960. Many listerners have started with the URR-35 and upgraded to a better receiver later on. The UHF Aircraft band may also be received by a crystal controlled receiver, or a synthesized receiver. The R-278 a tube type and the R-1120/TRC-87 and and R-1121/TRC-87 are available in the surplus market. The R-278 operates on 110 volts AC and is 10 channel synthesized (requires no crystals) and receives in 100 kc increments. The R-1120 is a 20 channel synthesized receiver and operates in 50 kc increments. The R-1121 is a single channel synthesized receiver and also operates in 50 kc increments. Both the R-1120 and the R-1121 must have the power supply converted to operate on 110 vac. Another way to receive the UHF Aircraft Band is to place and converter in front of your 118 to 136 Scanner.

The Converter will take the UHF signal and convert it so that it can be received on your scanner. For example when your scanner is receiving 118 to 136 with a converter it will be receivng 307 to 325, .Your reception is limted to the range of your Hi-Band Scanner in most cases 18 Mc. The advantage is that you can scan channels in this range. HAMRTONICS, 65 Moul Road, Hilton,N.Y. 14468 manufacturers converters and pre-amps for this range. The June 1981 catalogue list the cost at $119.95 and pre-amps at $33.95. GROVE ENTERPRISES is also working on a new converter to work with an aircraft scanner.

EQUIPMENT

I presently have the following equipment available for receiving the UHF Aircraft band.

RECEIVERS

R-1120/TRC-87 Manufactured by Motorola, all solid state, tunes from 225 to 399.95 in 50 kc increments,20 channel, synthesized and requires no crystals,sensitivity is 3 uv, IF Bandwidth is 40 kc, size is 5" X 20" X 20", weight is 50 pounds.Unit is used and requires power supply conversion, schematic diagrams included with unit. $350 plus shipping.

R-278,tube type, tunes from 225 to 399.9 in 100 kc increments,10 channel,synthesized and requires no crystals,sensivity is 6 uv,operates on 110 vac,size is 12 X 20 X 20, weight 100 lbs and must be shipped motor freight.$225 plus transportation charges.

Communications Electronics Inc. - CEI Model 960-9, solid state tunable receiver, 30 - 90 Mc and 60 - 300 Mc, with a selectiable 500 kc or 2 Mc bandwidth, size is 4" X 20" X 20", weight is 20 pounds, operates on 110 vac. $350 plus shipping.

CONVERTERS

Hamtronics Aircraft Converter receives 250 to 268 Mc when used with an aircraft scanner tunning 118 to 136 Mc. $99 including shipping..

Hamtronics Aircraft Converter receives 307 to 325 Mc when used with an aircraft scanner tunning 118 to 136 Mc. $99 including shipping.

AM-914/TRC Receiving Converter, receives 225 to 400 Mc with a 30 Mc IF Output. Unit described by Bob Grove in October 1980 CQ Magazine article. Unconverted with conversion article by Grove. Size 6" X 6" X 12", weight 10 pounds. $30 plus shipping.

MANUALS + DIAGRAMS

R-278 Schematic Diagrams available for $15.00 plus shipping
R-1120/TRC-87 Schematic Diagrams and partial manuals available for $35.00 plus shipping.
R-1121/TRC-87 Schematic Diagrams and partial manuals avaliable for $35.00 plus shipping.

If interested in any of the above I suggest you call to make sure the items are still available. The best time to reach me is between 6pm and 7pm eastern time. If you are interested in receiving my next list please send a stamped self addressed envelope.

Los Angeles Times ★ Monday, January 25, 1982 / Part I 3

Dial 'E' for Earth —

By LEE DEMBART, *Times Science Writer*

A major innovation in the technology of two-way radio communication will make it possible later this year for airline passengers to make telephone calls to people on the ground.

A dozen airlines have signed up with AirFone Inc., developer of the new system, to offer the service. It will be available at first on long west-east and east-west flights at $7.50 for the first three minutes and $1.25 for each additional minute, regardless of distance.

Each plane equipped for the service will have two channels that will be able to make contact with 26 ground stations, from which calls will be routed over regular telephone lines to the number being dialed.

No incoming calls will be allowed in order to prevent flight attendants from becoming telephone operators.

Some airlines are planning to attach the airphones to the walls of airplanes, perhaps in a vacant space near a door. Others say they may put them at passengers' seats. In any case, none is planning to have phone booths.

To place a call, a passenger will insert a credit card into a slot, releasing the handset. The credit card will be retained until the handset is replaced.

The handset will be cordless, so the passenger will be able to carry it to his seat. The handset will transmit to the main transmitter in the nose of the airplane.

Billing will be handled through the credit card. The phone company is not involved. The airlines, which will receive the equipment free from AirFone, will get commissions on each call.

The sound quality of the calls is said to be comparable to the quality of ordinary ground-based calls. In several tests, "people couldn't tell the difference between the regular telephone call and air-to-ground," said John D. Goeken, the ebullient president of AirFone, in an interview last week.

Although an air-to-ground telephone was tried nearly 20 years ago, the quality of the connection was poor, demand was slight and the experiment was dropped.

The key to the new system is the use of single sideband signals, which until now have been used almost exclusively in amateur radio. Use of single sideband, discovered in 1915, in the airphone is believed to be its first application to two-way commercial communication.

"The biggest thing we are doing is using single sideband, which is going to make a whole new era in two-way radio communications," Goeken said.

In ordinary radio, the information is carried on a signal that has upper and lower bands located on both sides of the frequency.

The single sideband, as its name implies, has only one band and is therefore narrower. As a result, more channels can be squeezed into the same area of the radio spectrum.

This is the feature that makes single sideband essential for the airphone system. The radio spectrum is very crowded, and the space assigned to the airphone is in an area used by UHF, television, radio astronomy and some mobile stations. In order to get enough channels to make the airphone system practical, each channel has to be very narrow.

Broadcasting from the airplane to the ground in the 900 megaHertz band, each AirFone channel will occupy 6 kiloHertz of bandwidth, about one-fifth the width of other air-to-ground communication systems.

When a call is made, a transmitter in the nose of the airplane will search for a ground station ahead of the plane to connect to. If more than one is within range, it will lock onto the station that is farthest away.

The system is not designed to hand off a call from one ground station to the next as the plane goes out of range. As a result, each call will be limited to between 20 and 40 minutes, depending on how close the plane is to the ground station when the call is made.

If a call goes on so long that the plane goes out of range, it will be cut off, and the caller will have to redial.

Goeken dismissed that limitation as a problem. "Only 1% of the passengers are going to want to talk more than 20 minutes," he said.

The FCC granted AirFone a developmental license in December, 1980. On the basis of tests conducted under that license, the commission concluded that the system is technically sound and approved the beginning of regular service.

One of the primary objectives of the commercial service will be to gather technical data on full coast-to-coast use, on which lakes and mountains might have an effect, and to determine how passengers actually use it.

Airlines signed up to begin AirFone service, probably in September, are American, Republic, Pan American, United, TWA, Eastern, Continental, Altair, Northwest, Air One, Delta and Braniff.

Goeken is a telephone pioneer who founded MCI, an alternate long-distance phone company, in 1963, then battled AT&T in court for a dozen years over its communications monopoly. He left to work on the airphone, for which he predicted a great future.

"When you check in," he said, "they'll ask, 'Smoking or no smoking? Aisle or window? Telephone or no telephone?' "

Beginners Corner

Have a question? If you are a new scanner listener and don't understand something about monitoring that almost everyone else seems to understand, send in your question. When possible, your question and the answer will be printed. No answers will be sent by return mail. Your name will not be printed. Write to: David E. Crowley, 7234 Balson Ave., University City, MO 63130.

Q. When a nearby transmitter on 154.325 MHz is keyed up, I get static on 154.370 MHz in my crystal controlled Regency scanner. What is the problem and how can I cure it?

A. I can't tell you exactly what the problem is but I think I know how to cure it. You may try what I call an "image" crystal for 154.370 MHz. I won't go into the theory here, but the crystal can be ordered from Sentry Manufacturing Co., Crystal Park, Chickasha, OK 73018, using the their stock number 77002, for a channel frequency of 154.370 and a crystal frequency of 55.02333 MHz. The simplest thing is to call their toll-free order number -(800) 654-8850, since I don't know their current price, and refer the order-taker to page 65 of their red 1977 catalogue. Be sure they understand that you want the special crystal frequency of 55.02333 and not the regular crystal frequency of 44.89000 MHz. For more on image reception see the Beginners Corner for Oct 1980, March 1981 and April 1981.

Q. What is the most effective portable VHF Hi antenna to replace the rubber ducky on the Fanon Courier 6-HLU, since I'm not interested in VHF-Lo or UHF?

A. My friend with the Bearcat 6-HLU ThinScan gets best results with a flexible wire plugged into the antenna socket. The issue of replacement antennas for pocket scanners immediately boils down to a question of threads. Many surplus electronic shops stock numerous types of small telescoping whip antennas intended for portable AM-FM radios, but their threads usually don't fit those in your scanner. What you need is access to a machine shop to have a small adaptor made. Or, try Russell Industries and ask for their replacement rubber ducky antenna catalogue - 3069 Lawson Boulevard, Oceanside, NY 11572.

Q. What advantage is the slow scan speed on my Bearcat?

A. As far as I can tell, it's a sales gimmick intended to appeal to large numbers of unsophisticated buyers.

Q. I have a Bearcat 250 with a serial number below 50,000. How can I extend its frequency range?

A. See below.

Comments for the month: The Beginners Corner for January 1982 contains an absurd statement which I didn't spot until I saw it in print. I suggested electromagnetic shielding as a last-gasp solution to interference from a nearby powerful paging transmitter if the interference persisted when the scanner's antenna was removed. Obviously, shielding the scanner will do no good, since the paging signals would get in through the antenna anyway when the set was in normal operation. Anyone else catch this?
In the same column I recommended a commercial grade TV distribution amplifier for multi-set coupling to a single outside antenna and a commercial grade notch filter, known as a cavity, to reduce interference from the paging transmitter. It was pointed out to me that devices intended specifically to perform these, and other, functions are available at reasonable cost from at least three distributors of accesories designed expressely for the scanner-hobbyist market:

Capri Electronics
Route 1, Box 91-1J
Cannon, GA 30520

Grove Enterprises
Brasstown, NC 28902

Don Nobles Electronics, Inc.
Route 7, Box 257
Hot Springs, AR 71901

In general I will follow the policy of recommending specific distributors' equipment only when I have used it myself or have favorable reports from readers. When appropriate, I will take into account unfavorble reports as well. If I have no other basis on which to make a specific recommendation, I will usually suggest commercial-grade devices.

I continue to receive requests for out-of-band programming techniques for various programmable scanners. Usually I am unable to fulfill these requests since I have only one scanner with which I am familiar enough to be specific. The method most likely to work with most programmables involves entering on the keyboard that frequency for which the desired frequency is the image. The image frequency is always above the desired frequency by an amount equall exactly to twice the Intermediate Frequency (IF) of the scanner involved. As a general rule Bearcat scanners use an IF of 10.8 MHz, except for the BC 250 with serial numbers below 100,000 which uses 10.85 MHz instead. As far as I know, the IF of Regency and Radio Shack scanners is 10.7 MHz. For example, in the VHF-Hi band, if you want to receive 143.460 MHz (a local Military Afficiate Radio Servce repeater),below the 146 MHz limit of the BC210, enter:

Bearcat; IF = 10.8 MHz: 143.460 + 21.6 = 165.060 MHz
Bearcat; IF = 10.85 MHz: 143.460 + 21.7 = 165.160 MHz
Regency; IF = 10.7 MHz: 143.460 + 21.4 = 164.860 MHz

In UHF, if you want to receive 415.200 MHz, which is below the 416 MHz limit of the BC210, enter:

Bearcat; IF = 10.8 MHz; 415.200 + 21.6 = 436.800 MHz
Bearcat; IF = 10.85 MHz: 415.200 + 21.7 = 436.900 MHz
Regency; IF = 10.7 MHz: 415.200 + 21.4 = 436.600 MHz

Get the idea? You enter a frequency above the desired channel by an amount equal to twice the IF of the receiver. If your instruction manual doesn't list the IF, try the trick suggested on page 4 of Police Call to determine the IF, then proceed as above. Until Santa Claus equips me with a sample of each programmable scanner, I will be unable to answer more questions on out-of-band programming techniques. If you're willing to part with a few dollars, DIGICOM, Dept. F-12, Box 1175, New York, NY 10009, has a publication which might help. Write them for a price list.

Speaking of price lists, numerous books, some out of print, can be obtained from Century Print Shop, 6059 Essex street, Riverside CA 92504. Write for their catalogue. The books, of course, relate to radio.

BELOW 30 MHZ

Robert Horvitz, editor

This column is for AM, SSB, RTTY, CW & FAX reception reports, explanatory notes, articles, news & questions related to HF utilities. Services covered in this column include civilian aeronautical, coastal/marine, government, military, weather, etc.--essentially everything except broadcasting, CB & amateur radio. Send to: Robert Horvitz, 54 East Manning St., Providence, RI 02906
If you need a reception report form, please enclose a SASE with your request.

AT&T's High-Seas Radiotelephone Service

by Ronald Pokatiloff (IL-083): I think the most interesting signals on shortwave are the ship-to-shore telephone calls. In the United States, AT&T operates 3 stations: WOM ("Whiskey-Oscar-Mike") in Ft. Lauderdale, FL; WOO in Manahawkin, NJ (New York); and KMI in Point Reyes, CA (San Francisco). WOM comes in the best at my midwest location; 8.722 is the most active fq at night. All high-seas stations use 2-fq duplex. However, you can often hear both sides, usually on the shore fq. It is best to use 2 radios, one for the ship transmissions (the best rig you have), and another for the shoreline station. An RF gain helps minimize static between the 2 receivers. The ship station usually calls the land installation. The shore radio operator points the antenna beams in the direction given by the ship and then he or she puts a telephone operator on the circuit. After the call--in the US or overseas--the operator gives the time and charges--usually about $30 for 3 minutes--and puts the shore station back on the line for sign-off. The radio talk is very fascinating...you would not believe what I have heard!! Even VIPs! All this is confidential of course. I think the very essence of radio is reflected in high-seas telephony. It takes skill to tune in 2 fqs at once. You feel like a real radio operator! Great fun!!

Some 8 and 13 MHz fqs from my personal loggings, Handler's Radio Communications Guide, and Ferrell's Confidential Frequency List:

Coast*	Ship*	Ch #	Call	Traffic Lists (GMT)	Weather (GMT)
8.7220	8.1981	802	WOM	0030+every 4 hrs	1230
8.7282	8.2043	804	KMI	0000+every 3 hrs	0000, 0600, 1500
8.7313	8.2074	805	WOM	0130+every 4 hrs	1330
8.7406	8.2167	808	WOO	0100+every 2 hrs	0100, 1300, 1900
8.7468	8.2229	810	WOM	0230+every 4 hrs	2230
8.7623	8.2384	815	WOO	0000+every 2 hrs	0200, 1400, 2000
8.7840	8.2601	822	KMI	0000+every 3 hrs	0000, 0600, 1500
13.1008	12.3300	1201	KMI	0000+every 3 hrs	0000, 0600, 1500
13.1070	12.3362	1203	WOO	0100+every 2 hrs	0100, 1300, 1900
13.1163	12.3455	1206	WOM	0030+every 4 hrs	1230
13.1225	12.3517	1208	WOM	0130+every 4 hrs	1330
13.1256	12.3548	1209	WOM	0230+every 4 hrs	2230
13.1442	12.3734	1215	WOM	0330+every 4 hrs	2330
13.1876	12.4168	1229	KMI	0000+every 3 hrs	0000, 0600, 1500

*USB

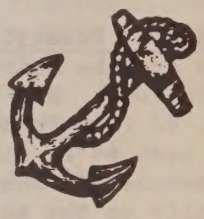
/Traffic Lists give the names of all ships who have phonecalls waiting, and are omitted if channel is busy at the scheduled time, according to Handler. Ron's list doesn't include all AT&T fqs in these 2 bands.--ed./

Automated Mutual-Assistance Vessel Rescue System

Continuing in a nautical vein, Ron sent 4 pages from the AMVER Bulletin, 1981 #3, giving 100s of fqs currently used in the Atlantic and Pacific Oceans for distress calls and rescue support operations. To save space, I'm omitting all CW and RTTY channels, and all fqs below 3 MHz, leaving these HF SSB duplex voice channels:

Below 30 MHz contin

Coast	Mobile	Guarded	Call, Location
4.4287	4.1250	Days	VIC, Carnarvon, Australia; VIR, Rockampton, Aust.a
		24 hrs	VID, Darwin, Aust.; VII, Thursday Island, Aust.; VIO, Broom Aust.; VIP, Perth, Aust.; VIS, Sydney, Aust.; VIT, Townsville, Aust.
4.4287	4.1343	0200-1200	NMG, New Orleans; NMN, Portsmouth, VA
		24 hrs	NMC, San Francisco; NMO, Honolulu
6.2155	6.2155	24 hrs	3DP, Suva, Fiji
6.5064	6.2000	24 hrs	NMA, Miami; NMC, San Francisco; NMF, Boston; NMG, New Orleans; NMN, Portsmouth, VA; NMO, Honolulu; NOJ, Kodiak, Alaska
		Nights	NRV, Guam
6.5126	6.2155	Days	VIC, Carnarvon; VIO, Broome; VIP, Perth; VIR, Rockampton
		24 hrs	VID, Darwin; VII, Thursday Island; VIS, Sydney
8.7654	8.2415	24 hrs	NMC, San Francisco; NMG, New Orleans; NMN, Portsmouth; NMO, Honolulu
8.7964	8.2725	24 hrs	PCG41, Scheveningen, Holland
13.1132	12.3424	24 hrs	NMC, San Francisco
		Days	NRV, Guam
		1200-0200	NMG, New Orleans; NMN, Portsmouth
13.1380	12.3672	24 hrs	PCG51, Scheveningen, Holland
17.3414	16.5685	24 hrs	PCG61, Scheveningen
22.6084	22.0124	24 hrs	PCG71, Scheveningen



Guarded = mobile fq is continually monitored during indicated period. Most stations also guard the 500 and 2182 kHz CW distress and calling channels 24 hrs a day. In the US, AMVER radio facilities are provided by the Coast Guard.

Finally, Ron confirms 20.1983 LSB as an important Space Shuttle fq. Using a Kenwood R-1000 receiver (and an R-388 for duplex), Ron reports: "Shuttle Control, also heard on 20.192 USB (not certain) before launch, switched to 20.1983 for takeoff. Astronaut talk heard." 1221+ GMT, Nov 4. Thanks, Ron, for your interesting and diverse contributions!

Smugglers

Still on a maritime roll (I should've titled this month's column, "Special All Wet Edition"!), we have an extraordinary collection of fqs allegedly used by smugglers. They're stolen from Vol. 1, No. 1 of Bob Grove's Monitoring Times (Jan-Feb 82), which many of you no doubt received last January. For those of you who might have missed this neat article, here's a condensation: "...Smugglers occupy the spectrum 14400-14500 kHz, with frequently-reported nets on 14400, 14455, 14460, 14462 and 14490 kHz...all USB. One unusually competent net sounds almost paramilitary with callsigns like "November Sierra One Eight Whiskey" and "November Sierra One One Tango". They have been heard on 14495 and 14505 kHz. Don't confuse these illegitimate renegades with the tactical communications of the Venezuelan Army on 14437 and 14439 kHz! One of the best organized--and insidious--of the mob-controlled networks is that of the infamous "Black Tuna Gang". With a fresh crop of marijuana presently being harvested in South America, listen for their USB, CW and RTTY transmissions on the following /MHz/ fqs:

13.987 These are contractors--large suppliers of Quaaludes, marijuana & cocaine. Look for "Alpha 9", the South American control station in Santa Marta, Colombia; "J-1", the #1 man in South America, possibly on his yacht; and "J-7", the #2 man in Santa Marta or the Bahamas

14.432 Base station in Santa Marta or Barranquilia, Colombia

14.445 "Capt. Nemo", the northern control station in Portland, Maine; also in use as maritime shrimper or when he's mobile

14.510 "Man with a Million Voices"--a group head on the East Coast, possibly in Washington, DC

14.517 "November", US East Coast/Bahamas group head; "44", aircraft in Tampa or Ft. Pierce, FL; "25", operation head in California or Washington, DC; "Big M", base & shrimp boats in Miami & FL Keys; "Nightrider", boat & aircraft in Miami/Keys; "Juliet Alpha", Bahamas base station; "Black-1", "Blackie", ?? in southern US; "Clark", mobile station in FL; "Alpha Golf", East Coast fixed or mobile.

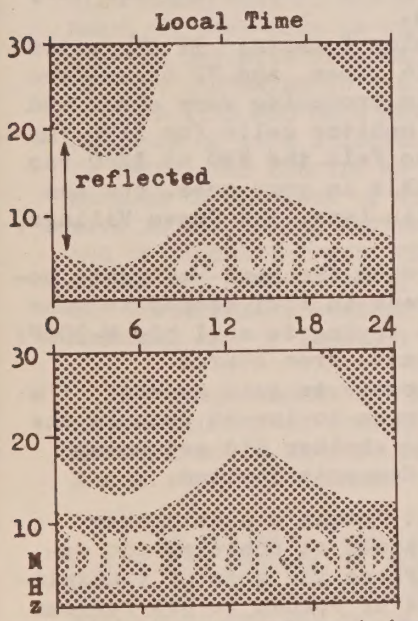
Numbers

VHF-UHFans may not be familiar with this phenomenon, but dozens of times a day unidentified HF stations briefly go on the air, recite a series of numbers or letters, and then go off. No ITU register reveals who operates these stations or where they're located, but some seem to follow a regular schedule, appearing at the same time every day or week, while others seem to pop up almost at random. As the messages seem to be in code, many listeners believe these transmissions are aimed at spies. Thanks to David Beck (AL-001), we have a short list of number stations active this past winter:

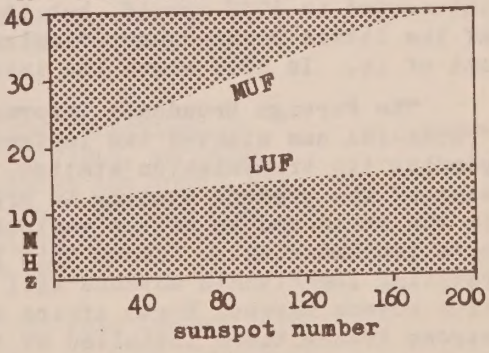
MHz	Mode	Date	GMT	Remarks
3.736	CW	10-31-81	0750	Groups of 5 #s in English (note this's in ham band)
6.600	USB	11-20-81	0448	Groups of 5 #s in Spanish, female voice
6.768	AM	1-5-82	0700	Groups of 4 #s in Spanish, female
9.073	AM	1-12-82	0534	Groups of 4 #s in Spanish, female
		1-14-82	0145	Groups of 4 #s in Spanish, female
9.452	USB	11-2-81	0548	Groups of 5 #s in German, female
10.177	USB	11-2-81	0540	Groups of 5 #s in German, female
10.500	USB	10-7-81	0445	Groups of 5 #s in German, female
10.680	CW	1-5-82	0319	Groups of 5 #s in English
10.820	AM	11-5-81	0520	Groups of 4 letters in English w Sp accent, female
12.366	AM?	1-5-82	0300	Groups of 5 #s in Spanish, female (poor modulation)

A very different kind of number station has been reported by our far-flung New Zealand correspondent, Charles Chenery (NZEL-001): on Oct. 26 at 2332 GMT he noted the WORLD BANK working Sydney, Australia with the latest currency exchange-rates on 23.548 USB. Might this be a regularly-scheduled service? part of a wider net? A penny (.005395 Swiss francs) for your thoughts.

In Print



Short-Term HF Forecasting and Analysis by James A. Manley, 111 pp., price $11 on paper, $3.50 on microfiche, from the National Technical Information Service, Springfield, VA 22161, order # AD-A096 833/9. Written last year for users of the USAF Global Weather Central's propagation forecasts--not for beginners, but not forbiddingly technical either--this document explains how the forecasts derive from raw data, interpretation & theory. Along the way one learns a great deal about electromagnetic weather and how the ionosphere behaves. These charts are redrawn from similar ones in the document. The top one shows how HF reflection varies over a daily cycle when the ionosphere is quiet. The one below it shows how an ionospheric storm affects the cycle: the Maximum Usable Frequency (MUF) is pushed down and the Lowest Usable Frequency (LUF) is raised, with the biggest impact around local dawn. (Of course, the distinction between a usable and an unusable fq isn't really so sharp or stable.) The chart at right shows how the number of sunspots affects propagation.



As you read this, copies of Robert Grove's new Shortwave Frequency Directory should be rolling off the presses. Covering 1.6-30 MHz with thousands of verified entries, the anticipated retail price is about $11. I haven't seen a copy yet, but I'm sure it'll be worth getting.

Definitely "Below 30 MHz" though not HF, the Navy's controversial plan to build a gigantic antenna in the northern midwest for C^3 links to deeply-submerged submarines is recounted by Lowell L. Klessig & Victor L. Strite in The ELF Odyssey:

National Security vs Environmental Protection, $25 from Westview Press, 5500 Central Ave., Boulder, CO 80301.

Outrageously overpriced, but possibly of interest to the technically-minded, is Shortwave Radio Receivers: January 1975-August 1981 (Citations from the International Information Service for the Physics and Engineering Communities), 71 citations in 72 pp., published by the National Telecommunications & Information Administration, available from NTIS (address above) as PB81-874752, price $30 on either paper or microfiche.

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R T T Y

Iden Rogers (CA-RI-001), former editor of the RCMA Newsletter, writes: "The RTTY bug has recently bitten me as it has others. After years of hearing RTTY signals and not knowing what they were saying I broke open my piggy bank and purchased an Info-Tech M-200F, the make and model most highly recommended to me. It arrived before I had purchased a monitor so I felt some pressure to quickly obtain a monitor in order to proceed with this new phase radio--new at least for me.

"A particular b&w 9" Sony was recommended. Not wanting further delays I set out to purchase this Sony locally, but no one had one that I could find within 50 miles. Feeling a little dumb that it hadn't hit me a little sooner, it dawned on me that computer stores might carry them--but again to no avail. One computer store salesman over the phone said he had something better. Of course, all salesmen have something 'better'. I was getting desperate so decided to at least go look, and it was only 3 miles away. It didn't take me long to realize that what he offered was superior to the recommended Sony and I purchased it within a couple of minutes. It is a NEC Monochrome Character Display JB-1201M. It has a 12 inch (diagonal measurement) screen, and produces a green readout, with characters very clearly displayed all the way to the edge of the screen.

"The M-200F has 4 switch-selectable character display formats: 32 characters x 16 lines, 32 characters x 25 lines, 72 characters x 16 lines, and 72 characters x 25 lines. The NEC monitor has no difficulty at all in producing very clear and readable copy using the 72 x 25 format. Gilfer's Sony monitor sells for $190 /my catalog shows that price for the Sanyo VM-4509--ed./, so felt the NEC at $260 was certainly worth the additional $70. If none are available in your area, you can no doubt obtain info from: NEC America, Inc., 130 Martin Lane, Elk Grove Village, IL 60007. Phone: 312-640-3750."

Thanks, Iden, for the suggestion. But in keeping with the post-Watergate policy of Full Disclosure, I should say that Iden's interest in RTTY seemed to wane even as he was writing the above. Last I heard, he was trying to sell his M-200F! This is an important question: RTTY is an exotic, constant, free source of information, but is it worth the 100s of dollars it costs to gain access? I'm interested in RTTY myself, but it seems like too big a risk to invest even in one of the little Times-Square-display decoders, not knowing whether I'd get enough out of it. Is RTTY worth the investment in hardware? Comments invited.

The Foreign Broadcast Information Service says that Jordan's news agency "PETRA-JNA has started the implementation of a project aimed at boosting and expanding its transmission station. The project will increase the area of transmission of the present station in order to convey the voice of Jordan to new regions in the world and to enable various other world news agencies to receive the agency's transmission... Under this project, a new 10 kw-strong transmitter and a rotating logarithmic antenna will be installed. Transmission of the present station covers Europe, North Africa and the Arab homeland by means of two 10 kw-strong transmitters installed at the beginning of 1979." Test transmissions to East Asia and Africa were scheduled to begin last August. (Worldwide Reports: Telecommunications Policy, Research & Development, 17 Sept 81)

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Great Moments in HF--Missed

Finally, Aviation Week & Space Technology, Jan. 25, reported that a Russian ELINT vessel, CCB-514, showed up for the first test launch of a Trident missile from the USS Ohio on Jan. 17. The incident happened about 50 miles off the

Florida coast. The Soviet ship came as close as 500 yards from the Ohio's telemetry mast. A USAF helicopter hovered over the ship, using bull horns and HF radio to tell the ship to get away, which it eventually did. What fq would be used on such an occasion? Well, having returned to the sea, I'll say Bon Voyage!

Business, Etc.

Send your contributions to Larry Smith, 1223 Vinsetta Blvd., Royal Oak, MI 48067.

GREETINGS! AND WELCOME TO ANOTHER EDITION OF THE BUSINESS COLUMN.

AS YOU HAVE NOTICED THIS COLUMN HAS NOT APPEARED ON A REGULAR BASIS DUE TO SOME CHANGES IN THE CLUB AND HOPEFULLY THERE WILL BE NO ABSENSE OF ARTICLES FROM NOW ON.

FOR THOSE THAT DO NOT KNOW ME AND FOR THOSE THAT DO TO INTRODUCE MYSELF A LITTLE, I AM 38 YEARS OF AGE AND SINGLE [NEVER BEEN MARRIED] AND LIVE JUST NORTH OF DETROIT IN THE CITY OF ROYAL OAK. I ALSO SPEND TIME AT OUR NORTHERN HOME ON LAKE HURON WHEN I CAN GET AWAY. I HAVE BEEN IN THE RADIO MONITORING HOBBY SINCE 1955 WHERE I STARTED OUT WITH SHORTWAVE WHICH IS STILL DABBLED WITH NOW AND THEN. IN 1975 I STARTED IN THE SCANNER HOBBY WITH AN OLD REGENCY 10-CHANNEL CRYSTAL TYPE AND HAVE WATCHED MY COLLECTION OF RADIOS GROW SINCE. IN DECEMBER OF 1976 I JOINED R.C.M.A. AND BECAME MICHIGAN'S FIRST MEMBER. IN 1978 I WAS ELECTED AS EDITOR OF THE OLD MI-OH COLUMN WHICH DIED BECAUSE OF THE LACK OF MEMBERSHIP INPUT. WHAT I SPEND ALOT OF TIME WITH IN MONITORING DEPENDS LARGELY ON THE SEASONS AS SOME THINGS HERE ARE OF INTEREST DURING CERTAIN TIMES OF THE YEAR. FORESTRY, BUSINESS, RAILROADS, VHF-AIRCRAFT, VHF-MARINE, SOME FEDERAL GOVERNMENT, A LITTLE LAW ENFORCEMENT, 2-METER AND 220 MHZ HAMS, TELEPHONES AND SECURITY AGENCIES ARE OF INTEREST TO ME.

I WILL WELCOME ANY AND ALL INPUT TO THIS COLUMN AT ANYTIME. TO BE AS ACCURATE AS POSSIBLE WHEN SENDING INFORMATION IN, TYPING THE MATERIAL WOULD BE MOST HELPFUL BUT IF YOU CANNOT TYPE PLEASE PRINT. NOW ON WITH THE COLUMN:

THE BUSINESS BAND COMPRISES ONE OF THE LARGEST SELECTIONS OF MONITORING VARIETY WE CAN LEARN FROM. THE MEDICAL FIELD, SECURITY COMPANIES, ALARM COMPANIES, HEATING/COOLING COMPANIES ARE JUST A FEW MANY OF US UTILIZE THEIR SERVICES FROM TIME TO TIME. NOW AND THEN I WILL INCLUDE SOME HELPFUL HINTS ON WHAT TO LISTEN TO AND HOW TO GO ABOUT FINDING NEW AND INTERESTING THINGS ON YOUR OWN.

IN THIS PART OF MICHIGAN [SOUTHEASTERN] IT HAS BEEN LEARNED MICH. BLUE CROSS/BLUE SHIELD HAS BEEN VICTIMIZED BY FRAUD BY SOME CLINICS MAINLY NEAR THE AUTO COMPANIES. BC/BS HAS THEIR OWN FRAUD INVESTIGATORS IN WHICH TO INVESTIGATE AND PROSECUTE WITH THE HELP OF LOCAL AND FEDERAL LAW ENFORCEMENT AGENCIES. A NUMBER OF THESE CLINICS HAVE BEEN FOUND OUT ABOUT AND MORE ARE BEING BROUGHT INTO THE OPEN DAILY. WITH MICHIGAN'S DEPRESSED ECONOMY [THE WORST IN THE COUNTRY] MORE AND MORE BRAVE INDIVIDUALS AND COMPANIES ARE TRYING TO BEAT THE LAW. WITH

THE HELP OF MICROFICHE I CAN COME UP WITH INTERESTING DETAILS ABOUT A LICENSEE ON WHETHER A STATION CAN BE HEARD WITH EASE OR NOT. BC/BS MOBILES ARE ON 469.250 [KP-7504], THEY RUN ON 3 WATTS OF POWER AND THEY HAVE 14 UNITS. THEIR BASE OPERATES ON 464.250 [KTH-933] AND THEY OPERATE ON 110 WATTS OF POWER, OUT OF DETROIT.

HOPE TO BE HEARING FROM YOU SOON WITH YOUR MATERIAL.

-- LARRY [MI-001]

CANADA

Send Canadian frequency information, radio system details, other information relating to Canadian monitor radio listening, and questions to: Robert Berezowski, 5832 Dalhousie Drive NW, Calgary, Alberta T3A 1T1 Canada.

Title: Impossible Missions Force Report #73/82983560-XFB
Subject: Radio Communications, Canada, VHF/UHF Mobile

Welcome back to the Canada column. We just started the winter session at the U of C. To kick things off the Engineering Faculty held it's annual Queen Week festivities. I still don't believe some of the things that went on. Some of the stunts, especially with regards to the Scavenger Hunt were really bizarre. How they pulled some of them off I am not sure,..... Anyway I have a lot of interesting material this month. There should be something for everyone.

I received a letter from Guy (CAN-031) who advises that the DOC has a new publication out. It is entitled "Table of Frequency Allocations" and supersedes a publication put out in 1974. This edition includes changes from WARC. Information on ordering this publication is available from DOC, Information Services, 300 Slater Street, Ottawa K1A 0C8.

Bob (CAN-024) sent in two very interesting articles from the Windsor Star. I did not think they would reproduce well in the newsletter, so I'll type them out. The subject of the two articles is the new OPP radio system. Both articles were written by Lee Palser in the Star Essex Bureau. The first article appeared in the Windsor Star on Jan. 7/82, while the second appeared on Jan. 8/82.

TRI-COUNTY OPP TO BE AIDED BY NEW DISPATCHING SERVICE

Toronto--A province-wide, $20-million program will reduce Ontario Provincial Police dispatching operations in 16 Ontario centres to free more officers from desk jobs.

Included in the program will be the tri-county area.

All car and manpower dispatching for Essex, Kent and Lambton counties will be handled in the Chatham division headquarters.

The move will take place during the next 12 months.

The project is expected to be completed within 18 months. Much of the groundwork has already been laid, with renovations to existing structures nearly finished.

The department now is awaiting arrival and installation of new equipment, such as relay towers and sophisticated telecommunications devices, before putting the system on the air.

It means the elimination of dispatching services in individual detachment offices, said Lloyd Collison, a civilian engineer with the OPP.

Collison said it would be impossible to say how many dispatching offices the system will eliminate, since many centres are not manned

on a 24-hour basis. But it's unlikely the public will notice much- if any difference-in effectiveness, he said, except that the service will be more efficient.

Calls to local OPP detachments will be automatically routed to Chatham via the department's own trunk cables if there is no one in the local office at the time.

There will be no long-distance charges, he said.

The program is similar to the method of dispatching smaller detachments such as those covered by municipal agreements with the OPP.

Callers in Belle River, for example, telephone their detachment office and if no one is there, are routed instantly to the main office on Highway 401.

Cruisers responsible for the municipality are then dispatched from the main detachment's radio.

The new system ushers in a new electronic era for the department and will allow readier communications by means of a mini-computer- about the size of a cigarette package- in the cruisers, Collison said.

Among other things, it will eliminate having officers in some detachments tied up with telephone and dispatching duties when they could be on the road. It will also decrease the number of civilian personnel now required.

The existing system is being overloaded with demands for the dispatcher who, when handling an information request, must telex the central computer for the information and relay it back to the officer over the radio.

Coupled with increased uses of that nature is the fact that dispatchers in Northern Ontario must monitor natural resources ministry frequencies while their counterparts in large urban areas like Toronto have transportation and communication ministry bands.

In both cases the dispatchers are partly or wholly responsible for routing emergency vehicles.

In addition, the communications department added General Radio Service (CB) equipment to many detachments to monitor distress calls from motorists and truckers, compounding the existing problems.

"It's getting overloaded, and something is bound to break down sooner or later," said Toronto OPP spokesman Eugene Dadds.

"The original system was designed to last 10 or 15 years- and any system will have a limited life. Most people would acknowledge that we got our time out of the existing system after 30 years."

NEW OPP RADIO SYSTEM PRAISED

Essex--County police authorities are generally pleased with plans to update Ontario Provincial Police communications.

"Anything like that is positive," said Leamington Chief Murray Whittle, referring to the $20-million program that will streamline OPP dispatching to 16 centres across the province.

The sophisticated radio technology-expected to be put into use in the next 12 months-will replace a system first designed in 1947.

Dispatching of all OPP units in Essex County will be handled through the Chatham detachment.

The four civilian dispatchers in Essex, along with their counterparts in Petrolia and Forest in Lambton County, will have to move or commute if they want to keep their jobs.

"I believe that's what the plan calls for," said OPP spokesman Brian Goodman in Toronto. "We'd like to keep these experienced people if we can, because it's better than having to train new people.

"The larger communications centre going into Chatham will require more people and those now doing the job would have a very good chance."

There are nine civilian dispatchers in the tri-county area, and eight more work out of divisional headquarters in Chatham.

Goodman also said there would be an advantage to having a former

Essex detachment dispatcher handling Essex County calls in Chatham. He said they would be familiar with the territory.

Corporal John Dadds, of the Toronto news bureau, said earlier the dispatchers would have detailed maps of each area in the county to further assist them in assigning cars to calls.

Telephone calls for assistance would be automatically routed to Chatham via special trunk telephone lines at no charge to the caller.

But the move may cause some difficulty for some departments.

Essex Police Chief Ed Primeau said he has been concerned Canadian Police Intelligence Centre (CPIC) calls now made through the Essex OPP office would have to go over long-distance lines to Chatham.

For example, CPIC checks for information are routinely made when a car is pulled over.

Well, that's the end of the second article. They contain a very interesting preview to the new OPP system. Those familiar with the current OPP system might be able to read between the lines for some more information. Anyway, many thanks to Bob for sending those articles in.

Last month I mentioned that the DOC was proposing the licencing of mobile services in the 800 MHz band. Included with this proposal was a proposal on a mobile-satellite service. With more information on this innovative service, here is a report from Robert Horvitz.

On Dec 9, 1981, Canada's Communications Minister, Francis Fox, announced that $17 million has been committed to engineering and economic studies for a satellite devoted entirely to servicing mobile radio-communications users: "A final decision to go ahead with the MSAT program will await government consideration of these studies... The demonstration satellite system could cost about $400 million and be launched by 1987. A recent survey of potential users shows a demand for MSAT services by the year 2000 of 140,000 user terminals in Canada. The projected world demand for this type of satellite and terminal is estimated to be in the many billions of dollars in the next 20 years. 'Canada would be in an ideal position to capture a significant amount of the world market, especially since we have a solid base of satellite expertise to draw on, with 20 years of cooperation by government and industry. MSAT will provide substantial benefits to users of mobile services, the manufacturing industry, the telecommunications industry and the Canadian economy. It will also establish the Canadian claim to our share of the limited UHF frequencies and orbital positions for a mobile communications satellite system.'" (Dept. of Communications' press release, quoted by Robert Horvitz, CT-048)

Thanks a lot for the information Robert. As I mentioned last month, I received some information from the DOC on the 800 MHz allocations. Basically what the DOC is doing is that the band is now allocated to mobile services. No licences have as of yet been issued. This band has been identified as the location for future expansion of the mobile radio service. The DOC is now accepting public opinion on the possible licencing of the band. This includes frequencies for cellular systems, satellite service, accomodation of existing services, and technical standards to name a few. It is quite an interesting article. One item the publication does not mention is when the licencing policy might come into effect, and when we might expect to see 800 MHz services on the air.

Another publication that I received from the DOC contains a table of spectrum allocations for the UHF range. I cannot determine when these allocations came into effect, but they are current. The primary service(s) are in capital letters, and the secondary service(s) are in brackets.

406.000 - 406.100	MOBILE SATELLITE / Earth to Space
406.100 - 410.000	RADIO ASTRONOMY, MOBILE, MOBILE SATELLITE (Earth to Space), (Fixed)

410.000 - 414.000	MOBILE (Fixed)
414.000 - 415.000	FIXED (Mobile)
415.000 - 419.000	MOBILE (Fixed)
419.000 - 420.000	FIXED (Mobile)
420.000 - 430.000	MOBILE (Fixed)
430.000 - 450.000	RADIOLOCATION (Amateur)
450.000 - 470.000	MOBILE (Fixed)
470.000 - 608.000	BROADCASTING
608.000 - 614.000	RADIO ASTRONOMY (Mobile Satellite)
614.000 - 806.000	BROADCASTING
806.000 - 890.000	MOBILE (Mobile Satellite)*
890.000 - 902.000	FIXED (Radiolocation)
902.000 - 928.000	FIXED (Radiolocation),(Amateur)
928.000 - 942.000	FIXED (Radiolocation)
942.000 - 960.000	FIXED

* The mobile satellite service is allocated in this band for the development of such systems.

You will please note that there is no mobile allocation in the 470-512 MHz band. This band is heavily used in some areas of the United States. Also the band from 410 to 430 MHz is not restricted to Federal Government agencies, as it is in the States. This band is open to all mobile users, such as business, public safety, local, provincial and federal governments. Users of all categories have been heard in Calgary, as well as other major cities.

This publication also contained a lot of footnotes in the allocations I have listed above. If you wish, you can obtain a copy of the publication "Spectrum Allocation Policy in the 406 to 960 MHz Frequency Band" from the DOC at the address above. I believe that this information is contained in the Table of Frequency Allocations, but I am not sure.

Quite a while back Carl(CAN-066) sent in a list for the Windsor area. I am afraid it was mislaid. With apologies to Carl, here it is. Personal note to Carl: I have not been able to find out any more information on those four frequencies you asked about.

Windsor City Police (XJG 62)	Precinct 1	Ch 1	142.035/138.015
	Precinct 2	Ch 2	142.215/138.195
	CPIC-NCIC	Ch 3	142.875/138.855
	Common	Ch 4	142.770/138.750
	Simplex	Ch 5	139.800/139.800
	Future Expansion	Ch 6	? ?
Windsor Fire Dept. (XJG 97)	Dispatch	Ch 1	154.145
	At Scene	Ch 2	154.280
	Intersystem		153.770
	Fire Marshall		154.070
	County Repeater		469.9375/ ?
Provincial Ambulance	City	Ch 1	149.170
	County	Ch 2	150.100
	Administration	Ch 3	149.440
	Hospitals	Ch 4	149.470

(Channel 3 is presently used as a patch to hospitals)

I'm afraid that I am going to have to cut it off at that point. I'll continue Carl's list next month. Also next month, a report on the BC Emergency Health Services. Myron (CAN-057) has sent in, along with some other very good lists, an excellent outline of the Health Services in the Victoria area. This will give us an insight into the province-wide service of life-saving paramedics. See you then.

contact / info wanted

This column has two purposes: to help members contact each other, and to help members obtain information directly from one another on various subjects related to 2-way communications monitoring. If you desire to converse, meet, or correspond with other members, by telephone, letter, or cassette tape in a certain geographic area, or with members who have similar listening interests, this is the perfect place for you to make your desires known. Remember -- those who respond will do so directly, so be sure to provide your phone number, the best time to be called, or your address.

Write to: John W. Darr, P. O. Box 1652, Cheyenne, WY 82001

• EDITOR's NOTE: As predicted, my recent hospitalization did
• interfere with getting this column into last month's Newsletter.
• Truly, I'm sorry! My apologies to Ed Soomre, Scott Bender,
• Dave Nugent, Eddie Muro, Mike Schroeder, Ron Murray, Duane
• Peck, Ken Bryant, Allan Nesteruk, and Ken Roberts, whose items
• would otherwise have appeared in the March issue. ☆☆☆

LOTS OF INFO WANTED! Need the following: detailed information on base station/ frequency allocation and mobile designators for New England Power Service (Mass Electric, Granite State Electric, Narragansett Electric). Already have the 13 frequencies used, and some information. Need unit numbering and districts for New Hampshire, Connecticut, Maine, Vermont, and Rhode Island State DPW's. Also need list of apparatus and stations for the NYC Fire Dept. (12-1-81)

EDWARD C SOOMRE (MA-Ø17), 1 Alcott Dr, Northboro, MA 01532

ROAD AMERICA (ELKHART LAKE, WISC) INFO NEEDED: Illinois member who goes to the June Sprints is looking for frequencies used by the communications and safety crews during races. Can any Wisconsin members help a frustrated race fan? (Address below)

SHUTTLE INFO NEEDED: Same member needs help in setting up a receiver and antenna. Has many questions to be answered; any help will be greatly appreciated. If anyone has a recording of any shuttle communications, he will supply a cassette for a copy. (12-3-81)

SCOTT BENDER (IL-198), 117 LaRue, Park Forest, IL 60466 // 312-481-2436

SHOULDER PATCHES WANTED: Member collecting shoulder patches of various state law enforcement agencies. Willing to trade or purchase. (Address below)

ATTENTION: HAMS Same member desires to communicate with other members who are radio operators. (12-4-81)

DAVID A NUGENT (IN-ØØ2), KA9ELR, 2542 Birk Drive, Jasper, IN 47546

PAGING LONG ISLANDERS: Member wishes to contact Long Island members with view to exchanging frequencies and information. Especially need Nassau County status codes. (12-8-81)

EDDIE MURO (NY-Ø41), P O Box 318, Woodmere, NY 11598-0318

CHICAGO POLICE TAPES: Will pay costs for quality cassette recordings of UHF Chicago police communications from the 13 zones. Interested only in nighttime hours, when monitoring is best. Set scanner for zone and citywide frequencies, with no delay, for comprehensive monitoring. (See Communications Profile, December 1981.) (12-8-81)

MIKE SCHROEDER (AR-Ø13), Route 4 Box 134B, Bentonville, AR 72712

ATTN: L.A.S.O. MONITORS Member would like to identify the following LASO unit numbers: 2F100, 2F280, 30HD, 30HI, 30H3. Would also like to obtain a list of LASO

detectives and other special unit numbering systems. Will exchange for his list of Ventura County Sheriff Detectives and special units. (12-10-81)
RON MURRAY (CA-VE-Ø13), 3650 Schooner Walk, Oxnard, CA 93030

WANTED: ALASKA INFO Member being assigned to Galena, Alaska, next May needs a list of freqs (HF, VHF, UHF) used in the state. Especially looking for police, fire, and conservation freqs. (12-14-81)
DUANE PECK (MS-ØØ9), 9232A Fairchild Drive, Biloxi, MS 39531

ATTN: MIAMI AREA MEMBERS/MIAMI RCMA GROUP Member wants to join local group. Also wants to get in contact with any area member and trade frequency information in exchange for any info you might need, whether it be local, state or federal pertaining to the State of Florida. (12-28-81)
KEN BRYANT (FL-126), 548 West 53rd Street, Hialeah, FL 33012 // 305-821-8345

WILL CORRESPOND WITH ANY MEMBER! Connecticut member wishes to exchange police or fire codes pertaining to Connecticut, New York, New Jersey, Massachusetts -- or anywhere in USA -- with any other member. (12-31-81)
ALLAN OAK NESTERUK (CT-Ø55), 45 Murray Street, Ansonia, CT 06401

FLORIDA INFO WANTED: Member seeking list of users and frequencies in the 851-866 MHz land mobile band for the southeast Florida coast area, especially Ft Lauderdale area, preferably FCC file info. Also seeking list of airlines and their AM company frequencies in use at Ft Lauderdale-Hollywood international airport (FLL). Send price, info. (1-1-82)
KENNETH ROBERTS (FL-Ø25), 5317 N.E. 4th Ave, Ft Lauderdale, FL 33334

ILLINOIS INFO WANTED: Illinois member interested in obtaining frequencies of mobile radios, military, and other "unlisted" frequencies in the Chicago area. Will appreciate all responses. (1-7-82)
G. WOJTON (IL-187), 431 S Park, Bensenville, IL 60101

CONTACT! PURPLE HEART VETERANS Organizing amateur radio operators and others into National Radio Chapter of Military Order of the Purple Heart, Inc. A net is planned along with a program of friendship and service to our members. Veterans awarded Purple Heart in any war are invited to contact the below for information and application. (1-7-82)
CLEM HARRIS (TX-11Ø), KC5MM ex-WB5VDL, 6110 Pecan Trail Drive, San Antonio, TX 78249 // 512-699-1420

BEARCAT 210(XL) INFO WANTED: New member, wishing to contact other members in the Tucson, AZ, area, is also looking for a lot of info regarding the BC 210(XL). Would like to get schematic and service manual. Also wants to know, is the 210 circuitry the same as the XL? Where is the FCC microfiche for southern Arizona and/or Tucson available? Is it feasible to modify the 210XL by putting a variable time delay in the circuitry? He plans to put a variable or on-off display control on his scanner. He wants to know, are there other worthwhile modifications in use? (1-22-82)
J. KNUTSEN (AZ-Ø42), Rt 7, Box 367-F, Tucson, AZ 85706

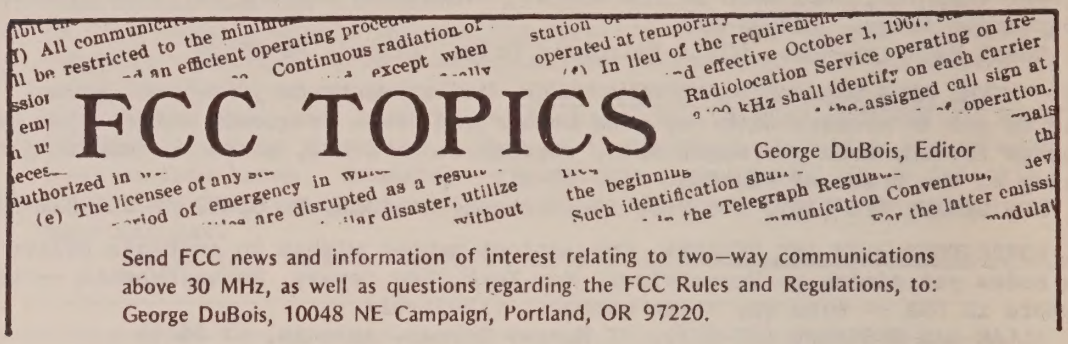
ATTN: BUCKEYE STATE MEMBERS Ohio scanner club is working on a project of having a member in every one of Ohio's 88 counties! Interested? Please send S.A.S.E. for details. (1-24-82)
JERRY CALLAM (OH-Ø15), 104 Maplewood, Mt Vernon, OH 43050

PAGING SAN BERNARDINO MEMBERS: Member would like to make friends with other scanner enthusiasts in San Bernardino, CA. (1-25-82)
TIM WILCOX (CA-SB-Ø45), 3102 East Highland Ave #36, Patton, CA 92369

TUCSON INFO WANTED: Tuscon member desires security and operations freqs for Hilton and Marriott Hotels. Also freq for Allstate and any other limousine services in Tucson. (1-26-82)
DEAN LASKO (AZ-Ø32), P O Box 27412, Tucson, AZ 85726

COP CASETTE SWAP: Northwest Arkansas member interested in cassette swap of law enforcement communications in his rural area for city police in metropolitan areas having detective, tactical, and citywide frequencies using repeaters. Such cities include Oklahoma City, Memphis, Knoxville, San Antonio, Ft Worth, Dallas, Tulsa, Chicago, etc. (1-26-82)
MIKE SCHROEDER (AR-Ø13), Route 4 Box 134B, Bentonville, AR 72712

UHF AIR FREQS: Member would like a list of UHF air frequencies and military air frequencies that he could pick up within a 200-mile radius of NYC. (1-27-82)
EDDIE MÚRO (NY-Ø41), P O Box 318, Woodmere, NY 11598-0318


FCC TOPICS
George DuBois, Editor
Send FCC news and information of interest relating to two-way communications above 30 MHz, as well as questions regarding the FCC Rules and Regulations, to: George DuBois, 10048 NE Campaign, Portland, OR 97220.

There have been a number of rumors floating around the last year or so regarding the FCC and the license microfiche. Well, this will lay some of them to rest. Or maybe start a few more.

First of all the FCC is not going to do away with the microfiche. At least not now. The only change right now is that the frequency of issue will be decreased. The Master Frequency list, for example, is only going to be issued two times a year, instead of three as in the past. The next set will be issued March 1.

What the FCC is going to do is go to computer terminals for the license data. In fact, these terminals are now in place in most of the field offices. The only files on the computer so far are the Master Frequency and the CB files. Where they go from here depends on a number of fiscal and legal restraints.

The two existing files load the present computer to its capacity. To add the other license data will require additional computer capacity, plus the time and manpower to accomplish the transfer. And the problem here is the budget cuts and the fact that no one knows how much money will be available, when, and for what. So far, there is no set order in which the existing files will be transferred. The FCC maintains 104 different "jobs", or sets of microfiche.

Now even when the transfer is completed, they won't just do away with the public microfiche files. In fact, they can't. Part 0 requires that license information be available to the public, in the field offices. So in a few months the Commission will release a Notice of Inquiry regarding the matter. This is when a number of questions will be decided. Like how the files will be made available. They could make a computer terminal available for public use, but this will require the purchase of more terminals and also leaves open the possibility of abuse of the system. They may just continue to contract for a few of the different license files on microfiche, to be used in the field offices or to be made available for sale. They undoubtedly won't be made up more than twice a year. The data on the fiche will be made up from the information on the computer. Or they could just amend Part 0 and eliminate the requirment that the license files be available in the offices!

Anyway, nothing has really changed, so far. And nothing concerning the availability of the license files will be decided until the Notice of Inquiry is released and the public has a chance to comment. I'll keep you advised.

GPO NEWS

Those of you who get the monthly pamphlet "Selected US Government Publications" from the Government Printing Office already know this, but if you don't, it's too late. A victim of the budget cuts, it's been discontinued. There was rarely anything of interest in them in the technical area, other than ten year old manuals from one or another branch of the service that they were evidently trying to unload. But there was a lot of other neat stuff. I ordered a couple of books a few months ago, the History of the Appollo Program and Landsat Views the World. Both hardbound, the latter is a collection of photographs taken

by the Landsat satellites. They are real interesting. But I guess they figure if you only buy a couple books every few years there's no way the monthly pamphlet will pay for itself. The GPO will now send circulars when you order something, but if you don't order regularly you won't even get these. Well, I guess I'll take my money and spend it somewhere else.

Just released from the GPO is a new edition of Title 47, Code of Federal Regulations. This edition includes FCC Part 2, Allocations/General Rules and Part 15, Radio Frequency Devices, and is revised as of Oct. 1, 1981. Right now, this would make it as current as a subscription to FCC Rules and Regs. Volume II, I think. To order, send $7.50 and ask for the Code of Federal Regulations, Title 47-Telecommunications, (Parts 0 to 19). If you want it on microfiche, send $2.25, but that's not going to do much for your eyesight. The address is: Government Printing Office, Washington, DC. 20402. Visa and Mastercard accepted.

FEDERAL GOV'T and ☆ MILITARY ☆

Robert B. Grove, Editor

Send all Federal Government and Military frequencies (including those of military aircraft), radio system details, and related questions to: Robert B. Grove, Route 1–Box 156, Brasstown, NC 28902. Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

MYSTERY SOLVED!

In a previous column we discussed an interesting beacon on 40.64 MHz. Brent (CA-SB-016) sent a copy of an article which appeared in Outdoor California (September/October) which sheds some light on the mystery.

It seems that the FCC has provided 10 frequencies (40.60-40.690 MHz, channel spacing every 10 kHz) for wildlife tracking. In that article, the California Department Of Fish and Game, in cooperation with the US Water and Power Resources Services (formerly Bureau of Reclamation) is described as conducting radio tag experiments with spawning salmon in the upper Sacramento River system! I suspect that the signals which we hear on 40.64 are tracking transmitters on larger game in some preserve. Any further information which might be supplied by readers would be appreciated.

FREE COPIES OF MONITORING TIMES.

The first 15,000 copies of Monitoring Times, covering all aspects of listening from the lowest to the highest frequencies, have been distributed and readers comments, compliments and suggestions are pouring in.

If you missed the first copy, simply request one from Grove Enterprises, Brasstown, NC 28902 Department N-1.

THOSE 225-400 MHz MILITARY AIRCRAFT FREQUENCIES.

With the Grove SCANVERTER now a reality, many listeners are eager for UHF Military/Government aircraft frequencies. This month we are pleased to feature an extensive set of those frequencies

contributed by the Dallas-Ft. Worth Metroplex study group, courtesy of Larry (TN-014).

382.8	Nas Dallas Ground Control
340.2	Nas Dallas Tower Primary
360.2	Nas Dallas Tower Secondary
364.0	Departure Control West
372.1	Departure Control East
322.1	Departure Control All Directions
360.6	Ft. Worth Center (MOP area) (Ft. Worth)
346.3	" " " (Slip Area) (Brownwood)
317.7	" " " (Slip Area) (Abilene)
353.7	" " " (MOA Recovery) (Ft. Worth)
287.9	" " " (MOA Recovery) (Scurry)
269.5	" " " (Binney) (Waco)
256.7	Regional Approach (West)
265.8	Regional App./Navy Dallas GCA
268.7	Regional App./Navy Dallas GCA
271.4	Regional App. Navy Dallas GCA
344.2	VF-201 Tactical
355.4	VF-202 Tactical/Maintenance
309.8	ARC-159 Regional App. Carswell AFB
255.9	ARC-159 Carswell Tower
376.0	Pilot to Dispatcher Carswell AFB
287.1	Carswell ATIS
292.5	General Dynamics Radio
284.1	General Dynamics Radio
275.8	Carswell Ground Control
252.1	AF Reserve Ops Carswell
392.5	PMSV (Pilot to metro service)

DYESS AFB

372.2	Pilot to Dispatcher
385.7	ATIS
295.7	Tower
236.6	Tower
275.8	Ground Control
349.4	Command Post (MAC)
344.6	PMSV Metro

SHEPPARD AFB

372.2	Pilot to Dispatcher
251.9	Sheppard App. Control
338.9/272.6	Sheppard Tower
289.9	Ground Control
292.3	Departure Control
289.0	Clearance Delivery
344.6	PMSV Metro

NAS PT. MUGU, CA.

339.4	Pt. Mugu Clearance Delivery
360.2	Pt. Mugu Ground
382.8	Pt. Mugu Tower Primary
340.2	Pt. Mugu Tower Secondary
325.0	Pt. Mugu Departure Approach Control
280.7	Plead Control Primary
263.8	Plead Control Secondary
268.8	Primary Tactical
338.0	Secondary Tactical
272.5	Pt. Mugu Departure/GCA
345.2	Pt. Mugu GCA
308.4	Pt. Mugu GCA
289.9	Beaver Control Primary also Pt. Mugu ATIS
326.5	Beaver Control Secondary
309.8	Ruthless Ruth Primary
333.0	Ruthless Ruth Secondary
258.7	VX-4 Base
344.2	VF-201 Tactical
277.2	Pt. Mugu ATIS
267.5	Pt. Mugu Base Operations
341.3	PMSV-PLEAD 13
269.8	UHF FAILURE/auxiliary equipment emergency instructions

295.5 Western Space and Missile Center
386.6 " " "

NWC CHINA LAKE, CA

307.2 Edward Approach Control
340.2/360.2 NWC China Lake Tower
360.2 Ground

Edwards AFB, CA

318.1/236.6 Tower
390.1 Ground
339.9/141.1 Engineering flt. activity (Army Aviation)
372.2 PTD
290.3 Dep. Cntl
269.9 ATIS

PALMDALE AF PLANT, CA

290.3 Edwards App/Departure Control
317.6 Tower
348.6 Ground

VANDENBURG AFB, CA

339.1/363.8 Approach
326.2 Tower
275.8 Ground
344.6 PMSV: METRO
372.2 PTD
324.3 Departure Control
321.0/311.0 Command Post

NAS MIRAMAR, CA

281.8 San Diego Approach
315.6/360.2 Tower
380.8 Ground
280.4 UHF failure/auxiliary equipment emergency instructions
301.3 Clinic Delivery
362.1 PMSV: METRO

MEAS EL TORO, CA

380.2/268.7 Coast Approach
271.7/360.2 Tower
383.8 Ground
284.2 ATIS
328.1 PTD
381.4/323.1 Coast Dep.
301.3 Clnc Delivery
344.6 PMSV: METRO

FALLON, NV

382.8 Fallon Ground Control
340.2 " Tower
360.2 " Bombing Target Check in
263.6 " Approach Control
255.4 " FSS Remp
341.0 Restricted Area B-16 Cntl (R4803 on charts)
271.4 " Area B-17E Cntl (R4804)
267.4 " Area B-17W Cntl (R4804)
265.8 " Area B-19 Cntl (R4810)
262.7 Electronic Warfare Range Control
339.0 Utah Range GCI (Clover) Primary
301.7 Clover (Secondary)
282.8 Search and rescue
245.0 SAREX (Search Air Rescue Exercise)
345.0 Air Wing Common
285.5 Oakland Center
340.5 Base Radio (Brace Base)
324.8 Fallon PMSV: Metro

140.040/139.550 Fallon Security F-1/F-2

USN CARRIER AIR WING 20

	SQUADRON	HOMEPORT	TYPE AIRCRAFT	MISSION
140.985	VFP-206	NAF Washington, DC	F8	Photo Recon
140.850	VA-203	NAS Cecil Field, FL	A7	Bombers
140.100	VA-204	NAS N. Orleans, LA	A7	Bombers
139.525	VA-205	NAS Atlanta, GA	A7	Bombers
416.025	VAW-78	NAS Norfolk, VA	E-2B	Command Cntr.
140.900	VAQ-209	NAS Norfolk, VA	A-6	Electronic
139.545/140.175	VAK-208	NAS Alameda CA	A-3	Tankers
138.855	VC-13	NAS Miramar, CA	A-4	Adversary
138.55	VC-12	NAS Oceania, VA	A-4	Adversary
140.175, 140.985, 139.545	VF201.202	NAS Dallas, TX	F-4	Fighters

Very nice system profile, Larry...thanks!

Another contribution this month is from Bruce (MD057) describing US Navy Medical Radio Network, in Washington DC.

The Navy Washington, D.C. area Regional Medical Radio Network (Mercy Net) is a two way simplex voice net consisting of 4 remote base transceivers positioned within the region for communications with ambulances enroute to the National Naval Medical Center, Bethesda, Md. (NNMC) from regional medical facilities. The base transceivers (located at Bethesda, Crownsville, and La Plata, Md. and Independence Hill, Va.) are all on the same frequency and are controlled from the NNMC Control Center. There is a remote control console located in the NNMC Emergency Room and Transportation Office. Each remote control can communicate over whatever base transceiver the NNMC Control Center assigns to them. The radio net includes phone patch capability and the ability to transmit telemetry via the Washington area UHF Med Channels.

In addition to each radio having the Mercy frequency, each will have one or more of the local operating frequencies used for fire, security, maintenance, or transportation.

Each ambulance has a Motorola MICOR Mobile Radio 110 watt 4 channel and a Motorola MX350 Handie-Talkie Portable 6 watt 4 channel. At Quantico, Patuxent River, and Annapolis are Motorola MX330 Portable Radios 6 watt 2 channel for use when patients are moved via helicopter so medical communications can be maintained.

Mercy Net	140.275
Local Operating Frequencies	
NNMC Paging System	148.275
NNMC Security and Fire Department	140.725
NNMC Public Works (maintenance)	142.525
NNMC Magic Swimmer Primary (disaster)	142.225
NNMC Magic Swimmer Secondary (disaster)	142.450
Naval Hospital Annapolis, Md	148.350
" " " "	148.425
" " Patuxent River, Md	140.100
" " " " "	140.700
" " Quantico, Va	149.350
" Communications Unit Cheltenham, Md	149.450
" Research Laboratory Washington, D.C.	140.980
" " " Chesapeake Beach, Md	140.980

"	Ordnance Station Indian Head, Md	140.580
"	" " " " "	138.940
"	Ship Research & Developement Command Carderock, Md	140.460
"	Surface Weapons Center White Oak, Md	139.500
Washington Navy Yard Washington, D.C.		149.350

Regional Medical Radio Network Callsigns

Mercy Control	NNMC Control Center
" 1	Commanding Officer NNMC
" 2	NNMC Emergency Room Ambulance Dispatch
" 3	NNMC Emergency Room Doctor Console
" 4	NNMC Transportation Office Ambulance Dispatch
" 5-11	NNMC Ambulances
" 12	Bureau Of Medicine & Surgery Shuttle Bus
" 20-22	Annapolis Regional Clinic Ambulances
" 30-31	Indian Head Regional Clinic Ambulances
" 40	Washington Navy Yard Regional Clinic Ambulances
" 41	U.S. Capitol Dispensary Ambulance
" 50-52	Patuxent River Regional Clinic Ambulances
" 60-63	Quantico Regional Clinic Ambulances
" 69	Quantico Base Station
" 70	Carderock Regional Clinic Ambulance
" 75	Cheltenham Regional Clinic Ambulance
" 80	Chesapeake Beach Regional Clinic Ambulance
" 85	Naval Research Laboratory Regional Clinic Ambulance
" 90	White Oak Regional Clinic Ambulance

Thanks, Bruce for a nicely-typed article!

COLUMN EDITOR WANTED!

After several years of writing the Federal/Military column for RCMA, I have found my professional obligations writing Monitoring Times and directing the development of Grove Enterprises to be more and more time consuming. For this reason I am requesting another qualified writer to take over this column.

It has been a pleasure corresponding with all of my readers and I am sure that mutual enjoyment of our hobby will continue through Monitoring Times as it has through RCMA. Please direct correspondence regarding your credentials and interest either to this column editor or to RCMA president Michael Redman.

International

Richard Stein, Editor

This column is for reporting two-way communications frequencies above 30 MHz, radio system details, monitoring experiences, and any other information relating to monitoring in countries other than the United States and Canada. Send to: Richard Stein, 456 Barrymore Place, North Brunswick, NJ 08902.

I've received a number of very interesting items over the past few weeks. In order to keep from using too much Newsletter space, I'm going to split the information out over the next three issues.

••••

Back in November, Bob Kurtz wrote and sent a cassette with some good sounds. He writes, "first thing this morning I turned on my Bearcat

250 and it locked in on 36.900MHz- our old friend the mystery repeater! It was transmitting something, though faint. I thought I recognized it as tv audio from France. A quick check with my PRO-3 confirmed this."

Bob's tape had a very strong signal on both units, although the PRO-3's reception of the AM audio was better. This was probably due to the fact that the PRO can receive am sigs and also because of the BC's narrow-band fm set up. I too received the French tv audio,on 41.23 only, and the BBC TV-1 audio on 41.50. Nothing on 36.90.

Bob continues, "the fact that 41.23 was being repeated by the 'mysterious one' on 36.90 PLUS also repeating the usual 33.90 stuff makes the whole thing more mysterious." Now it is possible that the signal at 41.23 is being received by the BC at 36.90 because, as was explained last month, the originating freq.

41.23-IF(10.85)=30.38 divided by 2= 15.19+ 2IF(21.70)=36.89.

This is certainly one possibility. However, I don't think it's likely that the PRO-3 also has the same IF. Also, Bob states, "I think at times that I hear a double squelch click (tail) so that maybe TWO repeaters are involved. If so how do we know where the other one is located and whether or not is has an input of 41.23? A most interesting problem. Any ideas out there?

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From The Times of India (Bombay), 3 Aug 81, via Worldwide Report: Telecommunications Policy, Research and Development, via R. Horvitz (CT-048). (Bob is our new HF Column editor):

Like in many Western countries, the two-way communication by radio will become a commonplace occurance in India in the next few years. The ministry of communications has decided to liberalize the issue of licenses for fixed and mobile radios to the public sector and government agencies that have a genuine need for two-way communications. It will take a while, however, before taxis and private cars would be allowed walkie-talkies. Official sources said that several aspects, including security, would have to be taken into account before putting the 2-way radio equipment in private hands.

Meanwhile, the Karnatka state transport corporation has been given a license for 2-way radios for keeping contact with its fleet of buses. The ministry has been flooded with inquiries from several state and Central government agencies for 2-way radio communication licenses, the sources said. The communications ministry is the custodian of radio frequencies and is responsible for the allocation of frequencies to various users.

The officials said the frequency bands reserved for 2-way traffic were at present under-utilized unlike in Western countries where the spectrum is saturated. They said the use of radio spectrum for meeting communication needs of government and public sector agencies would speed up the development process. There was always the possibility that the 2-way radios would be misused and hence the ministry would go slow in extending this facility to private agencies, the officials said.

The 2-way radio equipment would be fixed as well as mobile. A high-powered fixed equipment could cover a radius of 40km., they said.

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We have a third Mexican member, Rafael M. Mirano. Rafael lives in Tijuana, B.C. and has sent two pages of frequency information. That will appear in next month'sNewsletter. Here is an introduction from Rafael.

INTRODUCTION: Greetings to all the RCMA members, may you have a happy and prosperous New Year. Please allow me to introduce myself: I am Rafael and have been a member of RCMA for a year now and have been very delighted to belong to it. I have been a devout VHF and UHF monitor for about 15 years now, and have recently gone back to SWL especially on RTTY and CW. I am also an Amateur Radio Operator holding the call XE2HZN. I work mostly on 2 Meters and 220 Bands. I work for the Mexican Social Security in a Hospital here in Tijuana, Baja California as an Electronics Technician taking care of Medical Equipment and of the PABX Telephone room.
For my monitoring I use a Bearcat 20/20 Scanner, a Midland 3 band VHF-UHF tunable receiver, a Kenwood R-1000 Communications receiver for SWL, and an AEA code and RTTY reader. I also have several portable tunable AM-FM VHF receivers.

MONITORING IN MEXICO: As with many countries in the world, monitoring here is mostly on the Short Waves and mostly done on the International broadcast bands or the Amateur Bands. Monitoring of Police, Private or Government communications can be considered an offense depending on the view of the agency which feels affected. There is no law, to my knowledge, in this country which expressly forbids listening to Police or Government transmissions. There is a tough article in the Telecommunications Laws which forbids the divulging of what you hear to third parties. Due to the fact that different agencies take different views on listening to their transmissions, if you wish to bring a scanner or monitor when you come to Mexico, then do so discretely.

SCANNERS IN MEXICO: Scanners are not that popular and those who own one are either Radio Amateurs, or belong to a Government Agency. Most scanners are found here in Baja California, Mexico City, Guadalajara, and to a lesser extent, in other parts of the country. It is interesting to note that here in Tijuana, authorities do not frown of the use of them and accept them as part of every day life. I believe this is due to the fact that we are just across the border from the United States.

VHF-UHF EQUIPMENT IN MEXICO: We have many types of radios here in Mexico. There are Motorola, General Electric, Macromex (Regency design), Alba, ITT, Etc. Anyone who wishes to obtain a license to operate a 2-way radio can do so. Paperwork is elaborate but there is no restriction other than to show need for radio communication for business or personal use.

CITIZENS BAND IN MEXICO: 40 channels are allowed following the U.S. frequency plan. SSB is allowed and the maximum power is 5 watts. As with many countries, there is a lot of unlicensed operation, misuse of the band, and lots of use of unauthorized frequencies and power amplifiers.

BOOTLEG VHF OPERATIONS: Because of the proximity to the U.S. and the easy availability of radio equipment, not enough Government inspectors, etc., there is a severe problem with bootleg operations in the area of the Pacific Coast. Construction companies, maritime fishing fleets, ranches, etc. find it easy to buy radios in San Diego or Los Angeles, California, and use them without a license. Mostly we see Tempos S-1 and S-5, Icom IC-2A, Regencies, and since this equipment is for Amateur use, we amateurs have a hard time trying to get these people off our bands. I have personally 'relocated' some companies. Just to give you an idea of the problem, there are even bootleg repeaters and auto-patches!!!

THE MINISTRY OF COMMUNICATIONS: The correct name is La Secretaria de Comunicaciones y Transportes (SCT)- this is the sole agency in Mexico that regulates and issues licenses for all radio operations in the country. It also enforces the different laws that govern such opera-

tions. They have several monitoring stations throughout the country. One of them is here in Tijuana.

I hope that you have enjoyed this insite into monitoring in Mexico. If you have any questions or desire any particular information, feel free to write to me. (Rafael's address is: Ave. Hipodromo 20, Tijuana, B.C., Mexico 22420).

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Next month freq. info for Mexico. Hasta la próxima mes, y creyendo que este artículo aparezca en el número de abril, deseo para todos los miembros unas Felices Pascuas y שמח פסח

Marketplace

Gary M. Darcy, Editor

Members may advertise, free of charge, items wanted, items for sale, and items for trade that are associated with the hobby of monitor/utility radio listening. No dealer ads will be accepted for this column. RCMA assumes no responsibility for the outcome of any transactions between members resulting from ads printed in this column. Send to: RCMA MARKETPLACE, c/o Gary M. Darcy, P.O. Box 1329, Palmdale, CA 93550. Please be sure to include your membership number.

EFFECTIVE IMMEDIATELY: All Marketplace ads will be accepted ONLY on special forms available from this column's editor. Send a self-addressed STAMPED envelope (business size) to the address above to receive a supply of forms. Foreign members do not need to include postage on envelopes they send.

I wish to remind everyone using this column that dealer ads are not supposed to be accepted for publication in this column. Based on complaints that I have received, it appears that a few ads have gotten by me. In light of the fact that RCMA has suspended accepting any paid advertising for an indefinate period of time, I will run ads labeled "DEALER/MANUFACTURER LITERATURE AVAILABLE". These types of ads will contain no more than your business name, mailing address, and the type of literature you have available. THIS CATEGORY WILL CONTINUE TO EXIST ONLY UNTIL RCMA RESUMES TAKING PAID ADVERTISING.

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FOR SALE: Bearcat crystals. $ 2.00 each or $ 20.00 for 12. SASE for list. Contact: RICH WESTENDORF (CO-003), 3892 Nelson St., Wheatridge, CO 80033 or phone 303-423-1199.

WANTED: Gonset Super Six convertor with receiver. Must be in good working condition; physical condition not that important. Any equivalent equipment will be considered. Contact: JEFF HOWELL (KY-023), P.O. Box 237, Milton, KY 40045.

FOR SALE: Crystals for Regency, Realistic, Fanon, SBE, and RCA. SASE for list. Contact: BILL MULLOWNEY (MA-029), 62 Woodlawn St., Everett, MA 02149.

WANTED: 40 - 50 mhz (47.42) two-way. Prefer 50 - 100 W full or semi-solid state. For Red Cross disaster use (volunteer). Please be reasonable!!! Contact: TOM OVERALL (GA-036), P.O. Box 77154, Atlanta, GA 30357.

RCMA

Radio Communications Monitoring Association

P. O. Box 4563 / Anaheim, CA 92803

8. Space for advertising shall be sold only by the 1/4 page, 1/2 page, and full page. The maximum ad size any advertiser can run in a single month's Newsletter is a full page.

9. Advertisers who advertise a post office box address in lieu of a street address and phone number MUST provide the Advertising Manager with a street address and phone number. It will not be printed if you wish, but it must be on file in case a problem develops.

10. Advertising must fit comfortably within the confines of a rectangular box. The box size for a 1/4 page ad is 7" wide by 2 3/4" high. The box size for a 1/2 page ad is 7" wide by 5 1/2" high. The box size for a full page ad is 7" wide by 11 1/4" high. Advertisers must supply camera ready copy in the sizes listed above, in black and white.

11. No ads shall appear on the inside or outside pages of the front or rear cover, or on any of the first 10 pages. Advertisers will not specify where in the Newsletter their ads are to appear - this is at the discretion of the Newsletter Editor.

Advertising Manager:
Brad Leonard
Box 13602
St. Louis, MO 63138
314-868-5382

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ADVERTISING GUIDELINES FEBRUARY, 1982

1. Ads for products or services must relate to the hobby of monitoring two-way radio communications. This typically includes receivers, crystals, antenna systems (antennae, lead-in, coaxial switches & fittings, support structures, rotors, preamplifiers, multicouplers, etc.), carrier operated relays, frequency counters and RF signal generators (up to 512 Mhz.), converters, external synthesized oscillators, frequency references, books, appropriate tape recording systems, appropriate computer hardware/software, but not speed radar detectors.

2. Ads that will not be accepted include frequency lists or books that contain material considered by the RCMA Board to be sensitive, DVP descramblers, CB radios, or other items considered by the RCMA Board not to be in the best interest of the Newsletter.

3. Ads may include prices with these restrictions:
   a. Prices must be in effect for at least thirty days after the date on the cover of the Newsletter. For example, any material sent for the August Newsletter must be good at least until September 1, even though the August Newsletter is typically mailed in early July.
   b. The above, with any exception, shall be so stated in the ad. Closing dates on rebates and other special offers will also be listed.
   c. Information on shipping costs, credit card acceptance, C.O.D. Shipments, etc. must be stated in the ad.

4. The R.C.M.A. shall not be held responsible for any misrepresentation by advertisers. Readers are encouraged to contact the R.C.M.A. Board if problems develop. The Board will assist if it can in rectifying the problem.

5. The Advertising Manager and/or Board reserves the right to reject any and all advertising copy if it so chooses. If the membership documents unresolved problems with an advertiser, the R.C.M.A. reserves the right to refuse further ads from the offending firm. The decision of the Board is final.

6. Whenever possible, products and services should be described in an informative, educational manner, in good taste.

7. The amount of advertising in the Newsletter shall not exceed 12.5% not counting front or rear cover in the page count.

12. Advertising Rates: $50.00 for a full page ad, $30.00 for a 1/2 page ad, and $20.00 for a 1/4 page ad. Checks or money orders must be made payable to the RCMA, payment made in advance with advertising copy. Checks returned marked insufficient funds will be cause to refuse future advertising from the offending firm.

13. All inquiries and material shall be sent to the Advertising Manager. Contact him for deadlines - copy and checks shall be sent to him; he will forward same to California for Paste-Up if all guidelines are met.

FOR SALE: (TO AVOID DUTY & EXCHANGE RECOMMEND CANADIANS ONLY.) Bearcat 4-6 Thinscan. 3 months old and in mint condition. Includes all accessories plus power adapter, battery charger and four rechargeable batteries. $ 190.00 Canadian funds, shipping included. Contact: ERIC C. SAUVE (CANA-046), 1949 Creston Pl., Burlington, Ontario, Canada L7P 2Y5 or phone 416-639-7406.

WANTED: Technical manuals for the following:
(1.) Motorola receiver R/1121/TRC/87.
(2.) US surplus receiver R/44/ARR-5.
(3.) US surplus receiver BC-608.
(4.) US surplus receiver BC-603.
Contact: ROBERT LEARY (OH-093), 696 Fouse Ave., Akron, OH 44310.

WANTED: Knight Kit "Ocean Hopper" with or with out plug in frequency coils. State what you have and price. Contact: ROBERT LEARY (OH-093), 696 Fouse Ave., Akron, OH 44310.

FOR SALE: Yaesu FRT-7700 Antenna Tuner, matches the FRG-7700 receiver, like new. $ 30.00 includes shipping & insurance. SEND NO MONEY BEFORE WRITING ME. Contact: ROBERT LEARY (OH-093), 696 Fouse Ave., Akron, OH 44310.

FOR SALE: Bearcat BC-100. Never used, original box. $ 360.00. Also, Regency Aircraft scanner Model TMR-8A with crystals. $ 35.00. Contact: RALPH D. STERN (CA-SD-017) by phone at 714-488-4553.

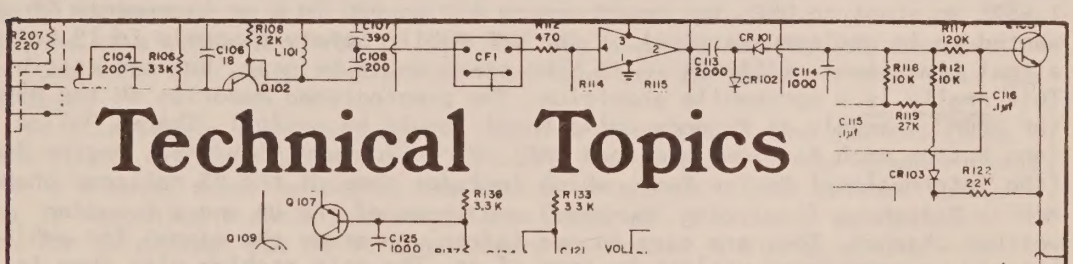
FOR SALE: Unimetrics Duo-Vox - 2 xtal operation w/recharger. Needs adjustment to on/off dial. W/crystals for: 154.400 / 155.535 / 155.850. Needs no antenna in NYC, extremely sensitive. Contact: STEVE TAKSLER (NJ-142), 143 Jefferson Blvd., Edison, NJ 08817 or phone 201-572-1061 between 1700-1900 ET.

FOR SALE: Sonar 2517 High band scanner w/10 NYC area crystals. Needs some work on squelch. $ 140.00. Contact: STEVE TAKSLER (NJ-142), 143 Jefferson Blvd., Edison, NJ 08817 or phone 201-572-1061 between 1700-1900 ET.

FOR SALE: Regency 8 channel monitor-radio; Hi band. Needs speaker work. $ 50.00. Contact: STEVE TAKSLER (NJ-142), 143 Jefferson Blvd., Edison, NJ 08817 or phone 201-572-1061 between 1700-1900 ET.

FOR SALE: Pace Scan - 10-4L; Low band-mobile only. $ 65.00. Contact: STEVE TAKSLER (NJ-142), 143 Jefferson Blvd., Edison, NJ 08817 or phone 201-572-1061 between 1700-1900 ET.

WANTED: Multiband or VHF rubber-duckie that will fit a Fanon-Courier Slimscan 6-HLU. 5/16" threads are too large, takes about a $\frac{1}{4}$" thread. Contact: GARY R. HOFFMAN (MO-025), 250 Comanche Lane, Florissant, MO 63033.



Technical Topics

Material for the Technical Topics column this month is supplied by George Dubois. Thanks, George! We do have a new Technical Topics editor, who will introduce himself in next month's column.

Ed. note

The Regency M400 - A review
by George DuBois

The following is a review of the Regency M400, plus a few modification hints. I wrote it for a couple of reasons. First, no one has done a review of the M400. Second, no one in the club bothers to do reviews of any radios anymore.

This is kind of dated now, of course, since Regency has come out with newer models including the "deluxe" model D810 with, of all things, the FM broadcast band. (IS that stereo or mono?) But the models M100/M400 continue to be popular, mainly because of their ideal design as a mobile scanner. (An AC wall transformer and a plug-in antenna are provided for home use.) Compact and rugged, they have hi/lo readout-intensity selection with a backlit keyboard and the audible "beep" when keys are pressed, although I still wouldn't like to enter a seven-digit frequency while driving.

I ran my recently acquired M400 for about a week before I tore into it, both to see if there were any defects that would require warranty work, and to gain an opinion of its "stock" performance. Electrically, its performance is very-good to excellent. It is very much comparable in sensitivity to the Bearcat 250, although its rated sensitivity is only slightly less. The M400 does not exhibit the same adjacent-channel overload as the Bearcats do on 15 kc or even 30 kc channels. There are quite a few birdies in the 406 to 420 area, but few in the VHF-high band, and only two in the 162-174 band. Audio quality is still typically Regency, with a very slight hum (only most noticable on an external speaker) and a slightly muffled sound from the internal speaker. Audio power is rated at an adequate two watts. There is little noticable microprocessor noise in the audio. The M100 and the M400 have identical receiver sections. The RF stages, the IF, the VCO, are all identical down to the last resistor in both radios. Therefore, the only consideration regarding the purchase of one model over the other would be whether you desire the programming features and the extra channels in the M400. (I'd like someone at Regency to explain why the specs on the M400 are slightly slightly better than the M100! I guess they want you to think you are getting a better receiver.)

Physically, the M100 and M400 both appear to be well made, with a much better quality of construction than earlier Regency scanners, which were definitely lacking in structural integrity. Appearance-wise, the labeling on the front panel controls are painted, raised letters, which will wear off in no time.

Operationally, the M400 is, again, still typically Regency. Although they have made great strides in ease of operation with the M100/M400 (over the T16 and related boat-anchors) Regency still has their head up their ass when it comes to designing a radio that you can use without having the instruction manual in front of you all the time.

The channels are in three banks of ten, labeled 100, 200 and 300. The 400 bank is for the search functions. Starting with the most desirable features (and proceeding to the most objectionable) is the programmable search increment. By pushing a mere nine buttons (they probably couldn't do it in less) you can make the search function go in any increment, up to 635 kc steps on VHF and 1.5875 mc steps on UHF. You could search 450 to 470 in 1 mc increments if you wanted to (a useless exercise) or the VHF Public Safety channels in 15 kc steps, a real time-saver. (162-174 in 12.5 kc steps would be neat, but not possible.) This really is a worthwhile provision. The preprogramed memories on the M400 (or "ROM" channels as Regency calls them) could be usefull. There's Police (one button each for low, high and UHF), Fire (low and high/UHF), Marine Band (the International Marine Band, which includes some of the US railroad channels) Mobile Telephone (including low-band) and three of the US and a Canadian weather channel. They are easy to use (after you study the manual for awhile) but may be considered useless by some of us. The main problem with them is that the guy who sat down and decided what to put in them must have been an idiot. (Or it was the same guy who made up the allocation table in the back of the instruction book.) On UHF, all the mobile (458 and 465) frequencies are included. Low-band mobile telephone could have been left out, as far as most of the country is concerned. And I don't know about you, but I don't like railroads and Broadcast Remote Pickup in my Marine Band!

There is no individual channel delay, only delay on all channels or none at all. In the programmable search mode there is either delay or "hold". Hold causes the search to stop and remain on a previously active frequency until the Bank Search button is pressed again. This will allow you to search without keeping a constant eye on the readout. It would be useful if there were no such things as intermod or birdies. The M400 has a four

digit clock, but it will not scan and display the time simultaneously. When the radio is turned off, it displays the time with six digits, including seconds. The elapsed timer is a useless function. The Priority is not disruptive but has too infrequent of a sample interval. (Everybody always bitches about priority. I guess if you dont' like it, you don't have to use it.

One neat provision is the ability to scan any or all of the thirty channels and then any (or all) of the "ROM" channels automatically. (This is one where you need to have the manual handy. I never could figure out how to do it more than twice.) Of course, what would have been far more valuable would be the ability to scan the channels, then go automatically into the programmable search, then back. This would really have been something I'd have liked.

Besides serving other functions, the Bank Search key allows you to search one bank at a time. Why, I don't know. The M400 still has a "program" mode, like the M100, except that the M400 has a separate Program key. You can't enter a frequency while monitoring a channel. When you go into this "program" mode the audio is muted. When you enter your frequency by pushing the Enter button, the frequency just sits there and flashes at you. You have to then select the channel you want the frequency in and go back to the manual or scan mode to receive it. That's if you remember what channel it was that you wanted to put the "entered" frequency in. (This just drives me up the wall!) Another irritation is the fact that I never know what channels are locked in or out. Even with the M100, with only one bank of ten channels, you have to watch the display (there is no slow speed), spot the missing channel (in ¼" high numerals) and then it's a simple matter of pushing that number on the keyboard to lock it in, or out. You can step through manually like you can on a 250 (or the M100), but not by pushing the Manual button repeatedly. You have to push each button, 1 through 10, to select each channel. Then, when you see the "L" displayed, you can't lock it back in! You have to go back to the scan mode and push the number of that channel. Now, with the M400 you have three banks. It's almost a game of skill to try and lock in a channel. This is about the only use for the Bank Search key, allowing you to go through one bank at a time, looking for locked-out channels. (The Bank Search key also starts the programmable search, but don't let that confuse you. You are probably already confused enough.)

If you can live with the programming song-and-dance and the lockout dilemma then, overall, the M400 will make you very happy. It is a very good radio, it just takes a long time to get used to running it. But, with a few modifications, it can be made even better.

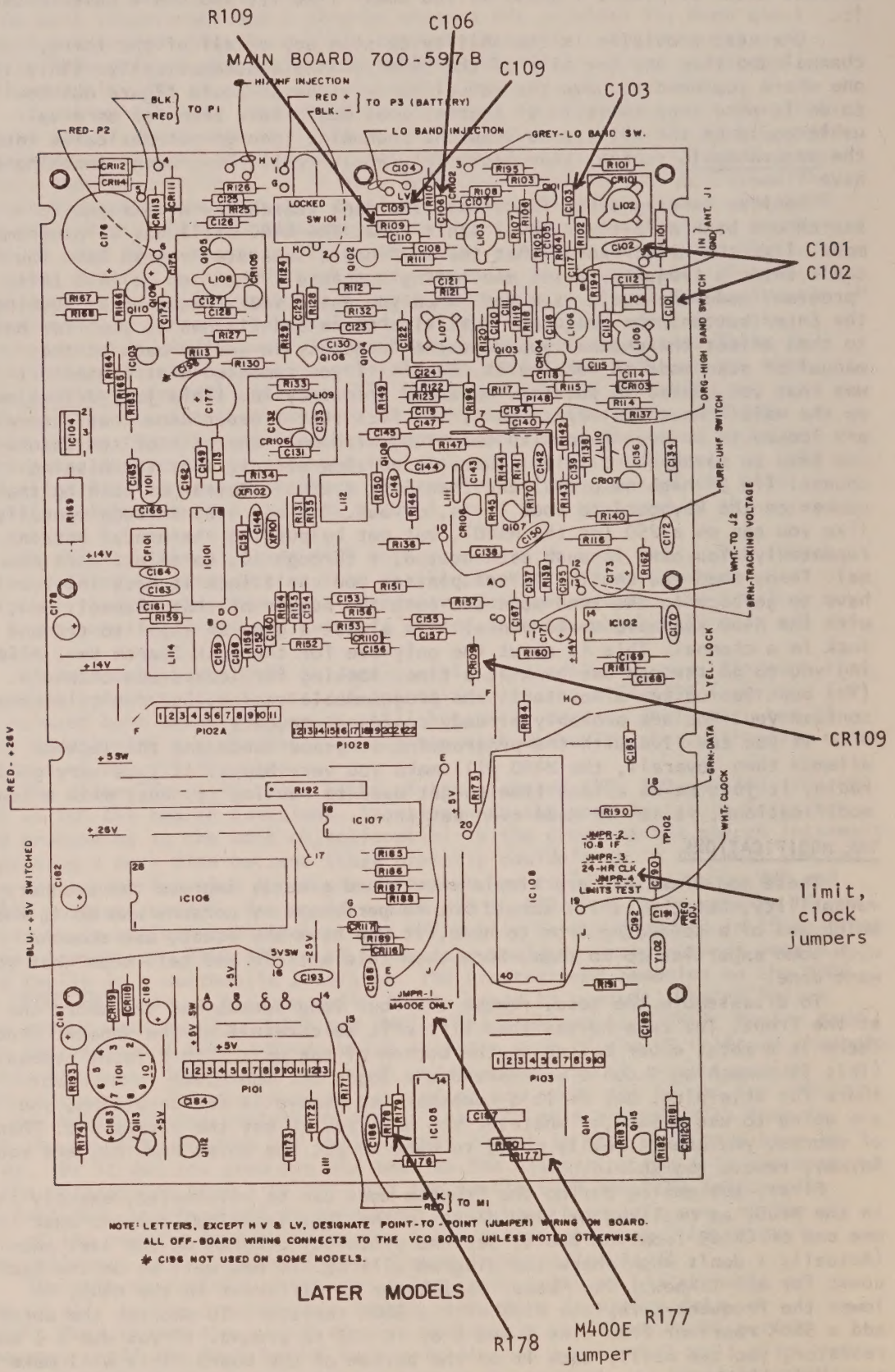
THE MODIFICATIONS

These modifications are simple enough and greatly improve the scanners versatility, but they still should not be performed by persons who don't know which end of a soldering iron to hold. If you have any doubt, ask someone with some expertise to do them. Show them this article and tell them what you want done.

To disassemble the case, remove the four long screws and the short one at the front. The case halves then lift off. Be carefull of the speaker leads. There is a metal cover bolted to the bottom of the unit with Bristol screws. (This is something I don't understand the logic of. The cover is no doubt there for shielding. But if it's necessary to remove it for servicing, you are going to use pliers,or whatever you have to, to get the screws out. Then, of course, you aren't really going to want to put the cover back on, are you?) Anyway, remove the shield.

First, the muting during the Program mode can be eliminated, exactly as in the M100, as outlined by Stan Hintz in the June Technical column. Just lift one end of CR109 from the board. See the pictorial diagram on the next page. (Actually I don't know where the diagram will be. It may well be on the back cover for all I know.) The "beep" oscillator is different in the M400. To lower the frequency, replace R178 with a 560K resistor. To shorten the duration, add a 560K resistor from pins 5 and 6 of IC 105 to ground. If you use a ¼ watt resistor, you can easily tack it on the bottom of the board. This will make a neat "click" when a key is depressed. To lower the volume of the "click", tack a 22K resistor accross R177, on the bottom side of the board, or just replace

(Text of article continued following this diagram)



R177 with a 10K resistor. Either way, you can use an even lower value resistor to reduce the volume further, if you desire. Or, you can keep the original "beep" and just lower its volume by lowering the value of R177. To just eliminate the beep, lift one end of either R176 or C185.

If you want a 24-hour clock, as opposed to the 12-hour type, install a jumper wire in the holes marked "24 hr clock". If, for some reason, you have to have a 10.8 mHz IF, install a jumper in the holes marked "10.8 IF". In effect, this shifts the microprocessor control output 100 kHz. Then you only have to change the IF filters and the second oscillator crystal. (You didn't really wnat to do this, did you?)

Now, to defeat the band limits you install a jumper in the holes marked "limits test". This applies to the M100, too. The M400s coming out now seem to have this jumper already installed. (Regency evidently wants to give us the bands we want, unlike Bearcat.) This will allow entry well beyond the normal limits, but bear in mind that the radio may not receive anything too far out of the normal range. When the VCO gets so far out of range it simply quits and you get the "Poor F." readout. The high-VHF and the UHF bands can be realigned very easily, but remember that both bands have the same VCO. So you have to consider a few options.

If you have no UHF-T band in your area and want maximum sensitivity in the 406-420 area align the set as follows, but remember that this will lower the VHF hi range also, to 133-167. Anyway, to align the VCO, locate the 39K resistor right in the middle of the VCO board, the vertical board on the left side of the radio. Hook a VTVM or TVM to the end of the resistor towards the rear of the set. Program 480 mHz into a channel and adjust the lower transformer at the rear of the VCO board for 14 volts. You'll probably have to cut down the tip of a flexible alignment tool so you can reach around the shield on the main board. Then, to align the RF, program 430.1 into the M400. With another programable scanner sitting nearby, program 440.9 into it, if it's a Bearcat (440.8 in a Regency) and lower the antenna for a weak signal in the M400. With the bottom shield in place, adjust C136, C143, C132 and then L108, for maximum signal strength in the M400 audio output. On VHF, put in 145.9 in the M400, 156.7 in the Bearcat sitting nearby (156.6 in a Regency), and align L105, L106 and L107 for maximum signal. The UHF now has a range of from 380 to 480 mHz, which is almost too low. The M400 has better sensitivity at the low end of the band, dropping off at the high end. So aligned this way, you have more gain where you might not need it. You can align lower than 380 if you want, but the M400 still will only receive FM. It'll work great for picking out the channels from a TRC-24, but have little use for receiving AM aircraft. You might also prefer the 162-174 band over the 138-144 band.

If you want fairly good sensitivity at 406 and at 162-174, align the VCO for 14 volts at 500 mHz, the RF at 430 mHz (as above), then align the VHF RF at 161 mHz. (Put 171.8 or 171.7 in the scanner you are using as a signal source.)

If you do need T-band and want maximum sensitivity in the 162-174 area don't touch the VCO. Align just the RF in both bands, at around 450 mHz and at 161 mHz. This will still let you receive repeaters in T-band while giving you better low-end UHF sensitivity.

The last major modification requires a little more work. Unlike the M100, the M400 has only one microprocessor for both the US and the European versions. By simply grounding pin 38 of the IC, an M400 becomes an M400E. After a few parts are changed in the RF stage, the M400E has a low-band of 66 to 88 mHz, although with the band limits disabled you can enter from 57.39 to 98.34. The high and UHF bands are unaffected. The M400E does not have the preprogrammed "ROM" channels. In the search mode the M400E searches low-band in 2.5 kHz increments, although you can program it to go in 20 kHz steps, the US spacing. If you want the 72-76 band, and can live with out the 30-50 or six-meter bands, then proceed as follows:

First, install the jumper in the holes marked "European" in the center front of the receiver board. Then change the following components:

ref.	old value	new value	Regency part number
C101	27pf.	5.6pf	1538-0569-608
C102	1000pf	27pf	1538-0270-508
C103	10pf	4.7pf	1538-0479-608
C106	1000pf	39pf	1538-0390-508
C109	1000pf	10pf	1538-0100-508
R109	100 ohm	330 ohm	4704-0331-032
L102			1800-3152-013
L103			1800-3152-012

For the caps you can use ceramic disc types if you want, type NPO. And you can wind your own coils, too. Or, the whole works should only set you back five or six bucks from Regency. Their minimum order is five dollars, so you might as well get it all from them. You might want to order the service manual while you are at it, part number 0300-1228-900, for five dollars.

To align the new "mid" band, program in 78 mHz and align L201, the VCO coil, for 17 volts at R211. Align the RF at 74 mHz by tuning L102 and L103 for maximum signal strength. The keyboard on the M400E is different from the M400. The 200, 300 and 400 keys now become the 100, 200 and 300 keys, respectively. The 100 key becomes the "Search Limit" key. When you program the search function you enter the first limit, push "enter", then the Search Limit (or 100) key, then the "1/upper"key. Before you would have pressed the 400 key, then 1/upper. Don't ask me why they didn't make the 400 key the Search Limit key. You can order a new keyboard from Regency (Part Number 2001-6066-803, price $10.47)or you can learn to live with the four keys out of place.

Now remember, if TV channels four and five are used in your area there won't be any fixed service in the 72-76 band. All the radio will do is a real good job of picking up TV audio, although it'll be good for use overseas.

You'll have to consider all the options before you do any of the modifications, particularly the M400E conversion. Think about what you need or want first. you may just like the radio the way it is. Like I said before, it is a very good-performing radio, overall. Thre's about a fifty dollar difference in price at the wholesale level between the M100 and the M400 but, to me the extra channels and the programmable search make it worth the price. Either radio would make a good investment.

photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two–way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two–way related equipment of interest, Photographs must be 3' by 5' inches or larger, black and white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE. Send photos or write to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301.

Well, if you turn the book sideways, you can see the most complete set-up of an Ohio member who remains anonymous. I'm going to paste in his description of the arrangement just as the member printed it lest I miss something in my summary. Your photo for next month?

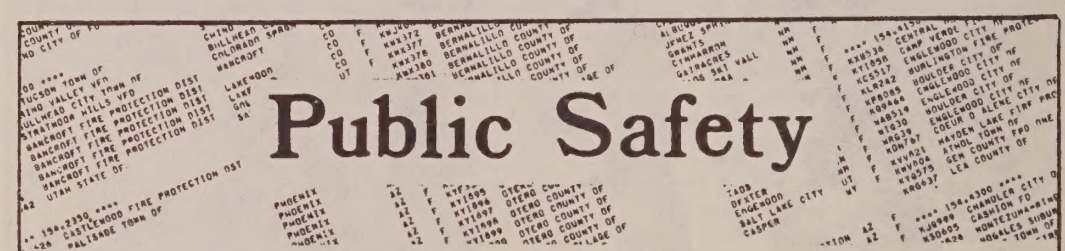
Please turn to page 48 for text accompanying photo.

STAR TREK
STAR TREK

'hoto Department continued

FROM LEFT TO RIGHT TOP SHELF-REGENCY TUNEABLE VHF SCANNER 152-174mhz,NEXT A PRE-AMP WITH 12 VOLT POWER SUPPLY FOR THE REGENCY,NEXT IS A ALLIED RADIO "STAR ROAMER" THAT I BUILT MYSELF QUITE A FEW YEARS AGO IT COVERS 200-400khz AND 1.8-30mhz.NEXT AN AM-FM STEREO, NEXT IS A ROTOR CONTROL FOR A SET OF TWIN HUSTLER DISCONE ANTENNAS.NEXT ON THE SHELF IS A PAIR OF SPEAKERS WITH BUILT IN POWER SUPPLY FOR 2 MILITARY SURPLUS RADIO'S AN R-13B TUNEABLE FROM 108-135mhz AND A R-19 TUNEABLE FROM 118-148mhz.ALSO ON TOP SHELF IS ANOTHER SURPLUS SET A AM-914/TRC COVERS 225-400mhz.ALSO HANGING FROM THE TOP SHELF ARE 5 SETS OF HEADPHONES THAT MATCH UP WITH THE DIFFERENT RECEIVERS. BOTTOM TABLES FROM LEFT TO RIGHT- A RME MODEL 4350 RECEIVER COVERS 1.8-30mhz AM AND SIDEBAND,NEXT IS ANOTHER SURPLUS RADIO CALLED A BC-639-A-TUNEABLE,COVERS 90-165mhz ON TOP OF THIS SET IS A COMBINATION SPEAKER AND POWER SUPPLY,NEXT TO THE RIGHT ON THE BOTTOM IS A MILITARY SET CALLED A R-278-B COVERS 220-399.9 IN 100khz STEPS 11 PRE-SET CHANNELS AT A TIME,THE SET IS NOT MANUALLY TUNEABLE AND HAS ABOUT 30 TUBES AND WEIGHS 125lbs. ON TOP OF THE "278" IS A BEARCAT MODEL 300 SCANNER WITH 50 PROGRAMABLE CHANNELS,ON TOP OF THE BEARCAT IS ANOTHER ANTENNA TUNER,BEHIND THE "278" AND THE BEARCAT ARE 2 MORE PRE-AMPS THAT ARE USED ON THESE 2 RADIO'S.NEXT GOING TO THE RIGHT ON THE BOTTOM I HAVE A MILITARY RADIO ,MODEL NO AN/GRR-5 TUNEABLE,COVERS1.5-18mhz IN 4 BANDS AM AND CW.ON TOP OF THE GRR-5 IS ANOTHER SCANNER THIS ONE JUST RECENTLY PUT ON THE MARKET IT'S CALLED A J.I.L.-SX-200 IT COVERS EVERYTHING FROM THE CB BAND UP TO 180mhz AND 380-512mhz AM AND FM IN 16 PROGRAMABLE CHANNELS.NEXT RADIO TO THE RIGHT ON THE BOTTOM IS THE FAMOUS AND "ELLUSIVE" MOTOROLA RADIO,THIS RADIO COVERS 220-399.95mhz IN 50khz STEPS,IT IS THE LATEST RADIO FOR THIS BAND THAT HAS BEEN RELEASED BY THE GOVERNMENT,ONLY 100 OF THESE SETS WERE MADE AND THEY COST "UNCLE SAM" $25,000 APIECE. THE SERIAL NUMBER ON MINE INDICATES IT WAS THE 5th ONE BUILT,THE MODEL NUMBER FOR THE MOTOROLA RADIO IF YOU GO LOOKING FOR ONE IS R/1121/TRC-87.ON TOP OF THE MOTOROLA IS A COBRA CB RADIO,MODEL NUMBER 142GTL AM AND SIDEBAND,ON TOP OF THE CB IS A PRE-AMP AND A SET OF SWR METERS.NEXT RADIO TO THE RIGHT ON THE BOTTOM IS ANOTHER MILITARY UHF RECEIVER,THIS ONE CALLED A AN/URR-35-C THIS RADIO COVERS 218-410mhz AND UNLIKE THE OTHERS IS FULLY MANUALLY TUNEABLE TO ANY FREQUENCY,THERE ARE ALSO PROVISIONS FOR CRYSTAL USE BUT THEY ARE EXTREMLY HARD TO FIND.ON TOP OF THE "35-C" IS A YAESU MODEL FRG-7700 SHORTWAVE RECEIVER WITH 12 CHANNEL MEMORY SYSTEM,THIS RADIO COVERS 150khz TO 30mhz IN 30 BANDS,THIS RADIO RECEIVES AM/FM/CW/USB/LSB.ON TOP OF THE "YAESU" IS A "MFJ"DELUXE PRESELECTOR MODEL "MFJ-1040". NEXT RIGHT BESIDE THE YAESU RECEIVER ON TOP IS A RCA VIDEO MONITOR THAT IS HOOKED UP TO THE YASEU RECEIVER FOR TELETYPE USE AND THE TERMINAL TELETYPE UNIT THAT I USE IS NEXT TO THE MONITOR ON THE RIGHT,THE TERMINAL UNIT IS A "INFO-TECH" MODEL M-200-F,THIS UNIT ALONG WITH THE VIDEO MONITOR AND THE YAESU RECEIVER WILL READ JUST ABOUT ANY SPEED OR MODE OF RRTY TELETYPE.ON THE BOTTOM OF THE M-200-F IS A "PAN SET"(PANARAMIC VEIWER)THAT I USE WITH THE RADIO NEXT TO THE RIGHT OF THIS PAN SET,THIS RADIO IS ANOTHER SURPLUS RADIO AND THE MODEL NUMBER IS AN/APR/4Y THIS RADIO COVERS 38-1,000mhz IN 4 BANDS AM AND FM. WELL THERE YOU HAVE IT THE BEST DESCRIPTION OF MY MONITORING STATION THAT I CAN GIVE,I DO HAVE OTHER EQUIPMENT THAT I COULD NOT FIT IN THE PHOTO,A BEARCAT 210,220 AND 250 SCANNERS PLUS OTHER MISCELANEOUS EQUIPMENT,I HOPE YOUR READERS WILL ENJOY THIS PHOTOGRAPH AS MUCH AS I ENJOY THE ACTUAL USE OF IT.

THANK YOU.



This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for police, sheriff, fire forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway and street maintenance, port authority/ bridge maintenance, animal control, ambulances, paramedics, hospitals, life guards, ski patrol, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional editors of Public Safety, who are listed below.

PUBLIC SAFETY - EAST

No column this month

PUBLIC SAFETY - CENTRAL

Send Public Safety and Special Emergency frequencies, radio system details, and questions as follows:
Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, and Texas to: Ken Pehl, 108 E. Centre St., Fredericksburg, Texas, 78624.
Illinois, Indiana, Wisconsin, and Michigan to John Arendt, 327 Boulder Hill Pass, Oswego, Illinois, 60543.
Iowa, Kansas, Kentucky, Minnesota, Missouri, Nebraska, North Dakota, South Dakota to Mike Redman, PO Box 1177, St. Charles, Missouri, 63301.

Greetings! Time for yet another PS-Central. We've got a whole bunch of material to cover this month thanks to a good number of members' contributions and two good editors, John and Ken. But we can't do it without you, so keep up the good work. Additional job responsibilities by Ken and the added load of the Presidency keep me busy and behind with the mail; so if Ken or I haven't had a chance to write and say "Thanks", it's only because we are busy and please accept our appreciation here. We really appreciate your input that keeps this column so full of information each month. Here we go....

MINNESOTA:

JAMES (MN-003) has sent a very lenghty and factual correspondence on the Minnesota State Patrol. Most of it appears this month, with the remainder to be presented next month. Many thanks, Jim!

Nestled against the border between the United States and Canada lies my home state of Minnesota, covering more than 85,000 square miles of territory. With the size of the state and the severity of the winters, you might expect to find a huge law enforcement agency blanketing the state, but the Minnesota State Patrol is a relatively small, highly efficient agency.

Although basically a traffic enforcement agency, the Minnesota State Patrol also has the responsibility of providing security for the Governor, visiting dignitaries, and various state properties, and also has the ability to provide immediate large-scale assistance to local jurisdictions when necessary. The MSP is widely recognized as an innovative leader in the fields of traffic law enforcement and accident investigation technology, regularly providing assistance and training to other agencies within the state and throughout the country.

As a symbol of their unigue geographical position and close relationship to Canada, the Patrol adopted a maroon color for their uniforms and marked squad cars. They claim that the unique color is a cross between the traditional blue uniforms of the United States and the scarlet uniforms of Canada's Royal Canadian Mounted Police.

ORGANIZATION

The Minnesota State Patrol is a division of the state Department of Public Safety and is comprised of 11 field districts, with centralized support services in Saint Paul. The three main divisions are Inspections, Research, and Field Operations, all under the direction of the office of the Chief. The majority of the Patrol's 504 troopers serve in the Field Operations division which is further divided into Communications, Training, Special Operations, Program Support, and District Operations. Three Special Operations units are stationed in Saint Paul, Duluth, and Mankato.

The Primary mission of the MSP is the enforcement of traffic laws and the support of local law enforcement agencies. With their limited resources, they view the reduction of traffic fatalities as their prime challenge in the coming years. Through years of experience and research the Minnesota State Patrol has evolved one of the most advanced accident investigation programs in the United States and they regularly train officers from all over the country in the science of acci-

dent reconstruction. In response to requests from other agencies, their specialists have traveled all over the country to assist in the reconstruction of significant or particularly difficult accidents.

EQUIPMENT

The standard sidearm for uniformed troopers of the Minnesota State Patrol is the Smith & Wesson Model 66 .357 Magnum revolver with the four-inch barrel. Issue ammunition is Federal 158-grain semi-wadcutter .357 Magnum. Other sidearms may be carried only with the approval of the Chief.

All troopers are issued 12 gauge shotguns which are carried in lock-mounts in the interior of the patrol vehicle. The standard firearm is either the Winchester Model 12 with a 20-inch barrel or the Remington Model 870 with an 18-inch barrel. Issue ammunition is 00 buckshot and 12 gauge sabot rounds are available as district supply centers for special needs. Special tactical weapon kits, which include CN tear gas cannisters, tear gas launchers, and pepper-fog generators, are also available to Patrol personnel.

The Minnesota State Patrol operates over 525 vehicles, primarily Dodge St. Regis sedans marked in the distinctive maroon color of the Patrol. Marked patrol units are equipped with light bars, factory installed AM/FM/CB radios, lo- and hi-band VHF FM radios. More than 400 of the patrol cars are equipped with various models of Kustom Signals' moving radar.

To assist in traffic enforcement and related duties, the Patrol operates both rotary and fixed-wing aircraft, all placed strategically throughout the state. The Patrol also operates a converted motor home which serves as a mobile command post and communications center.

The central headquarters of the MSP is located in Saint Paul, and the Training Academy is in Arden Hills. Eleven district headquarters, which are situated throughout the state, are as follows:

District	Location of Headquarters	Counties Served
2100	Rochester	Wabasha, Winona, Olmsted, Dodge, Houston, Fillmore, Goodhue, Freeborn, Mower, Steele, and Rice.
2200	Mankato	Blue Earth, Martin, Brown, Watonwan, Faribault, Waseca, LeSueur, Nicollet, Sibley, McLeod, and Carver (west of Young America).
2300	Marshall	Cottonwood, Jackson, Nobles, Rock, Pipestone, Murray, Lincoln, Lyon, Redwood, Renville, Yelow Medicine, Chippewa, and LacQuiParle.
2400	Saint Paul	Ramsey, Washington, Dakota, and Chisago.
2500	Golden Valley	Hennepin, Isanti, Anoka, Scott, and Carver (East of Young America).
2600	Saint Cloud	Stearns, Sherburne, Wright, Meeker, Kandiyohi, Stevens, Swift, Pope, Big Stone, Traverse, Benton, and Todd (south of Eagle Bend).
2700	Duluth	Pine, Carlton, Cook, Lake, and St. Louis (south of Floodwood and Central Lakes).
2800	Brainerd	Aitkin, Crow Wing, Cass, Hubbard, Mille Lacs, Morrison, and Kanabec.
2900	Detroit Lakes	Grant, Douglas, Wilkin, Mahnomen, Ottertail, Becker, Clay, Norman, Wadena, and Todd (north of Eagle Bend).
3100	Virginia	Koochiching, Itasca, and Saint Louis (north of Floodwood, Central Lakes, and including Ely).

3200	Thief River Falls	Kittson, Roseau, Lake of the Woods, Marshall, Pennington, Red Lake, Polk, Beltrami, and Clear-Water.

The State Patrol Districts are further broken down into Patrol Stations, for example, the Duluth District has five stations, 2710-Pine County, 2720-Carlton County, 2730-St. Louis County, 2740-Lake County, 2750-Cook County. These district numbers are significant when monitoring the communications of the State Patrol in that a typical call from the dispatcher might be as follows: "Duluth 2710 cars, prepare to copy, we have an attempt to locate . . ."

Troopers and Station Sergeants are identified by their respective badge numbers, preceeded by the initials "SP". Thus, we have SP305, SP4, SP83, etc. District Sergeants are identified by their district number in which they are stationed (first two digits), followed by the position they hold among the other District Sergeants in the same district. For example, the #2 District Sergeant in the Mankato District is identified on the radio as 2202. Captains are identified by the number of the district in which they command, i.e. the Commander of the Rochester District Office of the Minnesota State Patrol is "2100". Neither District Sergeants, nor Captains, have a number inscribed on their badge, but rather indicate their rank.

Higher ranking members of the MSP revert back to the initial badge number that they were originally issued. Thus, the current Chief of the Minnesota State Patrol, Colonel D. Roger Ledding, is identified as "SP15".

The State Patrol Radio System is shared with crime bureau agents, game wardens, and law compliance representatives. A typical investigator from the Department of Public Safety's Bureau of Criminal Apprehension (BCA) might identify on the radio as "BCA330". A game warden, or more officially a Department of Natural Resources (DNR) Conservation Officer, located in the Carlton County area is "K213". And a Law Compliance Representative (LCR) in the Mankato area is known as "LCR1605", these are the non-sworn personnel who operate the scale trucks.

MSP RADIO SYSTEM

The enclosed chart indicates the patrol district boundaries and their current operational frequencies. Most MSP squad cars have a General Electric 4-channel VHF FM hi-band radio. The first three channels are receive only and have crystals for area Sheriff's Department frequencies. The channel 4 position has TX/RX crystals for MINSEF, which stands for MINnesota Statewide Emergency Frequency, 155.475 MHz. This hi-band radio scans and has automatic priority on Statewide.

The primary radio, however, is a 4-channel VHF FM lo-band, most of which are Motorola. The first two channel positions depend on which district the car is normally assigned to. The channel three position is an aircraft and radar channel, 42.88. The channel four position is the Patrol's own statewide channel, 42.82.

Thus, by using the chart, you can determine what the channel plan should be for any given area. Thus, a typical set-up for a car in Duluth's District 2700 would be as follows:

Channel	Use	Frequency (RX/TX)
1	Car-to-Base/Base-to-Car	42.540/42.760
2	Car-to-Car	42.540/42.540
3	Aircraft and Radar	42.880/42.880
4	Statewide (MSP)	42.820/42.820

Or a car in the Mankato State Patrol District:

1	Car-to-Base/Base-to-Car	42.640/42.720
2	Car-to-Car	42.640/42.640
3	Aircraft and Radar	42.880/42.880
4	Statewide (MSP)	42.820/42.820

The dispatcher at the District Office monitors traffic on Channels 1, 2, and 4, but cannot monitor (normally) operations on Channel 3. Thus, a trooper can call the base on Channel 1 or 2, but to talk to another trooper in the field he must use channel 2. Activity on Channel 3 is typically used by "Project 55" cars, which travel from district to district enforcing the 55MPH speed limit. However, since this frequency is not generally monitored by the dispatcher (nor does it activate the high-band repeater) they must switch to Channel 4 for records, or computer information, when out of their district.

Throughout the state, the dispatch centers of the MSP monitor local operational police/sheriff frequencies as well as the inter-system frequencies (Point-to-Point and Statewide), thereby providing a direct means of communications (through cross-monitoring) with the local agencies. The MSP base stations are operated either on-site or remotely. Remote operation is conducted through use of radio control or land lines. In addition, repeaters and satellite receivers are used to enhance performance in certain "poor coverage" areas of the state. Apparently "voters" are used in at least some dispatch centers to pick which transmitter site to use, based on which receives the strongest transmission.

Duluth, for example, apparently can transmit from four sites, the first being direct from District H.Q. (on 42.540). It's repeater located in the south end of the district at Sandstone (155.505/154.680). And also from towers located in Floodwood (to the west) and in Grand Marais. Thus, after a dispatcher clears from giving a message to the entire district, he will sign off with the time and four complete call letters. For example, ". . .at 23:27 KAJ780 (direct), WDN69 (Sandstone mobile relay), KAW331 (Floodwood tower), KAL393 (Grand Marais tower)." Selection of the proper transmitting site, along with the "voter", is achieved by directional base antennas.

EMERGENCY MEDICAL SERVICES IN MINNESOTA (EMS)

The Minnesota Department of Health is in charge of the licensing of ambulance services in the state. The enclosed chart shows the health districts, and the mandatory radio frequencies. The frequency 155.340 MHz is known as "Statewide EMS". The other mandatory frequencies are generally known in their areas as "Regional EMS".

Although the state mandates that these channels be installed in ambulance radios throughout the state, not all EMS traffic will be found on these channels.

For example, in Carlton County, there are ambulance services operating in the cities of Cloquet, Carlton, Cromwell, and Moose Lake. These ambulances are usually dispatched by the Sheriff's Central Dispatch on the county's local government channel 153.995/158.805 MHz. This local government network also serves the County Highway Dept. and fire departments within the county. They also can operate on 155.355, 155.340, and MINSEF Channel 4 155.475.

In Pine County, where there is ambulance service from three different cities, the units are dispatched on the Sheriff's channel of 155.970/155.130. Then, when enroute to a local hospital, switch over to an EMS channel.

In the city of Mankato, residents are served by KOST Service, a private firm, who operates on mobile telephone (radio common carrier Channel 3). The frequency pair 158.520/152.060 is used, but both the mobile and base frequency must be monitored because, when communicating with the base, they operate as a two-frequency simplex. When enroute to the local hospital, however, they use a regular phone patch and both sides of the conversation can be monitored on 152.060. The use of a mobile telephone also gives them the advantage of communicating directly with complainant, dispatchers, doctors, emergency rooms, etc.

Emergency Medical Services in other parts of the state, including the seven-county metropolitan area, can be found on business-band frequencies, fire department channels, police/sheriff channels, as

well as the paramedic frequencies of 463.000 through 463.175, known as "MED 1" through "MED 8". Regardless of who owns them or how they are dispatched, they all still must comply with the Department of Health's Mandatory Radio Frequencies.

PRIMARY COUNTY FREQUENCY CHART

Almost a year ago I compiled my own version of the State of Minnesota Primary County Frequency Chart. To the best of my knowledge, no other chart of this type exists for Minnesota. Using Police Call, Betty Bearcat Frequency Directory, Action Radio, lists from dealers, and a lot of my own monitoring, I listed the main frequencies in use by Sheriff's Departments in their respective counties. And, when space permitted it, I also listed other frequencies that I felt were appropriate, such as police departments, fire departments, and local government channels that are often shared by a variety of municipal services. Quite often a city may be large enough to have its own police department, but not large enough to warrant its own dispatching facilities, or separate radio network. Thus they share the services of the Sheriff's Departments' dispatchers. Or, as in the case of the metropolitan area, they may or may not dispatch themselves, but still have access to the Sheriff's Radio Network for mutual aid, info., etc.

MISCELLANEOUS

Finally abit about the Minnesota Department of Transportation. I have monitored their activities on the frequency pairs of 156.045/151.025 (Ch. 1) and 156.135/151.070 (Ch. 2). These channels seem to be used statewide and may be quite inactive for a long while until bad weather strikes and then they become quite active with road reports, and what highways have or have not been sanded, plowed, etc. They also rebroadcast reports from the National Weather Service at certain specified times.

The Department of Natural Resources (DNR) operates on 151.325, 151.415, 151.265, and 151.475. These also appear to be used statewide, although I haven't had a chance to monitor them very much, they must use an automatic c.w. identifier as their primary channel will activate every 15 minutes with "Morse code".

ALABAMA, ARKANSAS, LOUISIANA, MISSISSIPPI, OKLAHOMA, TEXAS:

Greetings and welcome to one more edition of this column. As I write this in mid-January, winter has come to central Texas, as well as to the rest of the state. Everyone hopefully has been listening to the highway dept. for the latest happenings on road conditions. I hope everyone who has listened to this activity has kept notes and will be sending those notes in to this editor for a compilation later on this year. As I gather more experience in the editing game, I will next year hopefully know better as to when to start the winter info listening column. As it happened this time the most important info on winter monitoring will be/has been published in the February column instead of the December or January issue where such info would do the most good. My apologies for any problems this may have have caused to any listener.

Before moving to the main feature article, let me remind you to provide this column with your input, no matter how small, as without input there can be no column. Also I would like to point out that when sending me input for the column, it is not a requirement to have the information in typed form. I do not mind typing up the information from legible long-hand if it means having input for the column. You may type if you feel so inclined and if you do so, please follow the guidelines provided in #8 on the inside cover of your newsletter. Also, please bear in mind guidelines #4 and #5.

The RCMA Dallas/Fort Worth Chapter has provided me with some Dallas

Police Dept. district patrol sector maps. Due to space limitations, they can not be published in this column but I will offer them on a SASE basis, plus $1.00 to cover copying costs.

From an anonymous source: Some additional information has been received regarding the Texas Dept of Highways & Public Transportation unit numbering system. The information provided is for a specific highway dept district; however, the same or similar numbering method exists in other dept districts with perhaps minor variations here and there. I will list them in a general type format:

SDHPT Unit Numbering (valid on 2100's and higher)

xx01's	District Engineer	xx13's	District Warehouse
xx02's	District Administrative Engr. or Assistant Dist. Engr.	xx14's	District Mechanics
		xx15's---xx17's	Pool Equipment
xx03's	District Maintenance Engr.	xx18's	Special Maint. Foreman
xx04's	District Construction Engr.	xx19's	Radio Supt.
xx05's	Maintenance Superintendent	xx20's	Not assigned
xx06's	Right of Way Engr.	xx21's	Traffic Signal Electrician
xx07's	Design Engr.	xx22's	Center Stripe Crew
xx08's	District Lab.	xx23's	District Safety Officer
xx09's	Traffic Section	xx24's---xx26's	Not Assigned
xx10's	Equipment Supt.	xx27's	District Maint.Engr. Technician
xx11's--xx12's	Pool Equipment	xx28's + higher	County Maint. Foremans and Resident Engrs.

In addition:

SDHPT DIVISIONS
(Austin based)

D-3	Finance (0300's)	D-12	Motor Vehicle Div. (1200's)
D-4	Equipment & Procurement (0400's)	D-13	Personnel Div. (1300's)
D-5	Bridge Div. (0500's)	D-15	Right of Way Div. (1500's)
D-6	Construction Div. (0600's)	D-16	Travel & Information (1600's)
D-8	Highway Design (0800's)	D-18	Safety & Maint. Ops. (1800's)
D-9	Materials & Testing (0900's)	D-19	Automation Div. (1900's)
D-10	Transportation & Planning (1000's)	D-20	Insurance Div. (2000's)

Note: Any Division number not listed indicates that division deleted and/or combined with another division. At present these are the only divisions in existance.

Now on to what we were all breathlessly awaiting since last month. As promised, here is part II of the article on the Dallas FD, graciously provided by the RCMA Dallas/Fort Worth Chapter. I have repeated some of the items from last month's part I for the convenience of those who prefer having complete system articles all in one issue.

From the DFW Chapter:

DALLAS FIRE DEPARTMENT & EMS RADIO SYSTEM

CHANNEL	BASE FREQ.		MOBILE FREQ. (input)	USEAGE
Dispatch	460.575	R	465.575	Fire & MICU Dispatch (for units in station) (Voice & digital)
Dispatch	952.300		-----	Fire Dispatch (not in use at present)
1	154.415	R *	154.070	MICU Back-up & news media info/aux. ch.
2	154.130	R	154.415	Ambulance (MICU's) Ch.--Primary
3	153.890	R *	154.220	Fire Equipment Ch.--Primary (Also for dispatch of apparatus while out of station)
4	154.160	R *	154.340	Paging, Bio-medic auxiliary, and multi-alarm fires (see note)
Interagency	154.280	B/M	154.280	Interagency (not in use at present)

Biomedical---Emergency Medical Services:

1	463.000	468.000	MED-1	Voice & Telemetry
2	463.100	468.100	MED-5	" " "
3	463.050	468.050	MED-3	" " "
4	463.025	468.025	MED-2	" " "
5 **	463.075 **	468.075	MED-4	" " "
	(462.950)**	(467.950)	(MED-9 Voice only on non-telemetry patient) (see notes below)	

* = Channel 1 was the primary fire channel until problems with the repeater system forced a change to channel 3. Channel 1 is now used for media updates or as a tactical frequency (including simultaneous transmission of announcements over the City of Dallas News Service ((a subscription telephone circuit for news organizations)).) On multiple alarm fires and all high rise fires, the dispatcher will instruct responding units which channel to use at the scene. Some Fire Dept hand-helds operate simplex on channel 4. In such cases they might not be heard when used at a high rise or multi-alarm fire, unless the listener is very close. Also note that in recent months, channel 1's input and output were reversed.

** = Channel 5 on some of the biomedic radios will be 462.950/467.950. When so equipped, this channel will be used for non-telemetry type patient information exchange between the MICU and the hospital.

Remarks: Apparatus is numbered by station--Engine 1, Truck 24, Rescue 4, Squad 42, etc. DFD has the following types of apparatus: Engines, Trucks, Rescues, Squads (four man power units), boats, boat cars (which pull the boats), A-wagons (Engine 22-A for example, which are special engines outfitted with more water and less hose than the standard engine), and crash units. "X" units are extra units, used when regular apparatus is out of service or when extra units are needed. If the extra engine at Station 57 (Engine 57-X) replaces Engine 22, then the X-unit becomes Engine 22. If, however, it is put into service, but is not replacing another unit, it would still be Engine 57-X. In practice, this only effects MICU's since apparatus normally are not called into service as extras, although extra units are frequently used to replace down equipment.

There are 10 Districts and 2 Areas in the Dallas FD. A Batallion Chief answers all structure fires, rescues, and air crashes. Batallion Chiefs are numbered by District Numbers, such as Batallion 1, Batallion 10, etc. The Area Chiefs respond upon 2nd alarm. The Salvation Army Canteen (Unit 896) responds in the 3rd alarm. The training officers (Units 814 & 815) respond on 2nd alarm, as does an Aero Unit (821), to re-fill the SCBA Air Tanks. Another Aero Unit (820) also often responds. The photographers (811 & 812) respond on daytime 2nd alarms, nighttime 3rd alarms, and all fatalities. Assistant Chiefs (801---804) respond on 4th alarms. The Fire Chief (800) may or may not respond before the 5th alarm. The on-duty Arson Investigator (984) responds to all working fires and all multi-alarm fires.

(Editor note: The DFW Chapter informs me that the UHF channel for dispatching is equipped with a digital process that drives a printer in each station which provides a hard copy of the dispatched call. The stations printer "answers back" in digital to confirm receipt of the message. Mobile units once en-route acknowledge on the VHF radio. All engines and other fire apparatus are equipped with all FD channels including the ambulance channels (except telemetry channels) and are heard often co-ordinating with the ambulances on the ambulance channel. Likewise the ambulances are equipped with all the FD channels and can be heard on the fire equipment channel co-ordinating with the fire apparatus as needed. A recently arrived bit of additional info states that ch 3 is also used for dispatching equipment that is out of station, such as en-route back to the station. In such cases, there will be an alerting tone preceding the dispatch.)

We now pick up with a roster of Dallas Fire Dept stations and locations:

DALLAS FIRE DEPT

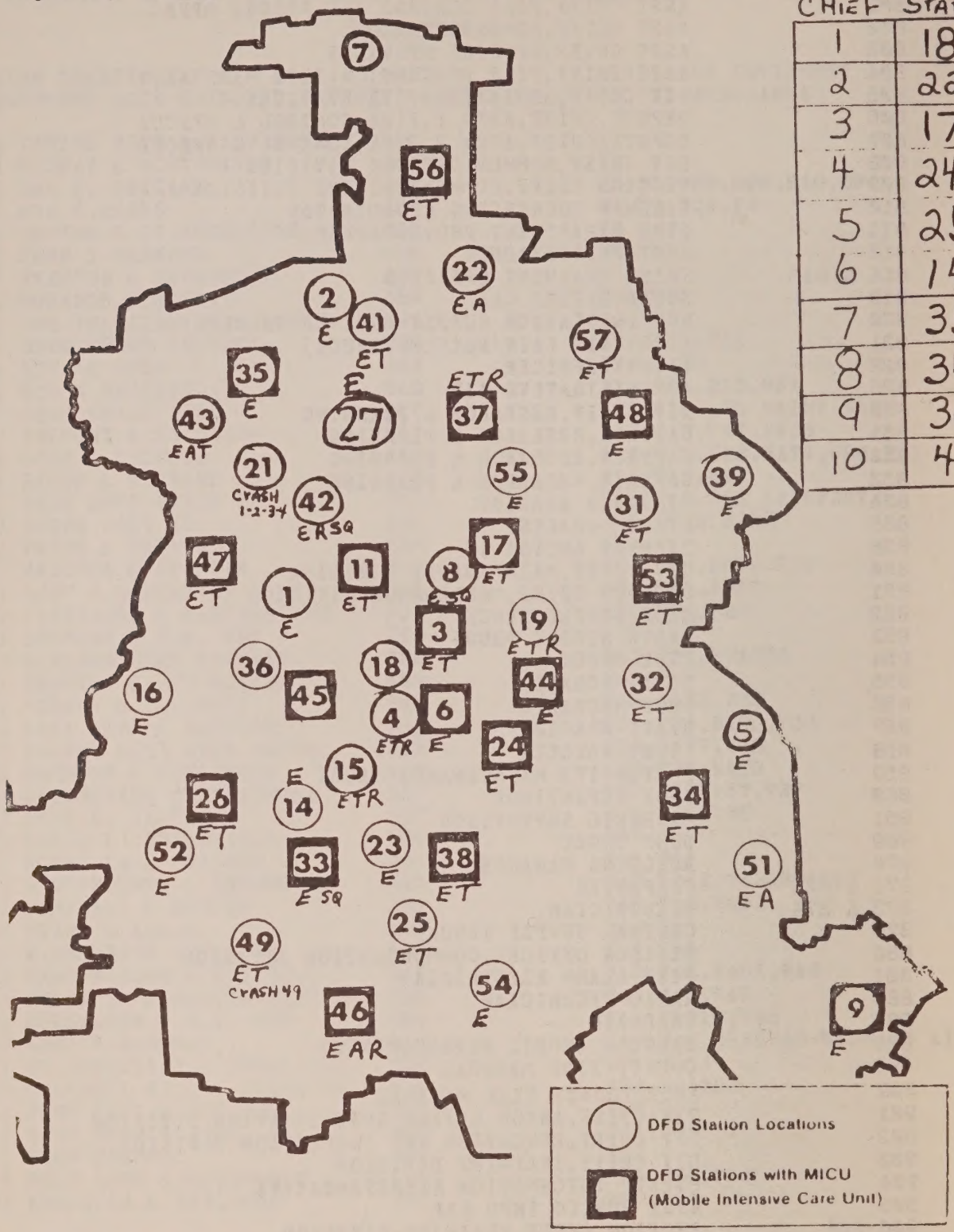
'ATION LOCATIONS	MAPSCO	AVAILABLE EQUIPMENT
EQUIPMENT CODE-E=ENGINE,T=TRUCK,X=EXTRA,R=RESCUE,7XX=AMBULANCE)		
1) IRVING BLVD & HARVESTER	44G	E1
2) MIDWAY & NORTHHAVEN	24B	E2
3) 500 N. OAKLAND	45M	E3,T3,703,896,819,806
4) 816 S.AKARD	45Q	E4,T4,SQ4,R4
5) BRUTON & ST.AUGUSTINE	59B	E5
6) 2808 S.HARWOOD	46W	E6,706
7) PRESTON & DAVENPORT	05P	E7
8) MONARCH & GARRFT	36W	E8,SQ8
9) 205 BELTLINE(NEAR HAWN)	69A	E9,709
1) 3900 CEDAR SPRINGS	35W	E11,T11,711
4) 12TH & POLK	54F	E14,BAT6
5) 8TH & BECKLEY	54D	E15,T15,R15,807
6) 2616 CHALK HILL	42Y	E16,(ADJ TO MAINT BASE)
7) BELMONT & SKILLMAN	36T	E17,T17,717,BAT3
8) ROSS & GRIFFIN	45K	E18,T18,E10,BAT1,820,821
9) BACON & E.GRAND	46H	E19,T19,R19
1) 3210 LOVE FIELD DR	34E	CRASH 1,2,3 (AIRPORT)
2) 12200 COIT RD	16X	E22,E22A,BAT2
3) EWING & VERMONT	55N	E23
4) HATCHER & CROZIER	56C	E24,T24,BAT4,724
5) 4607 S.LANCASTER	65G	E25,T25,BAT5
6) JEFFERSON & WESTMORLAND	53F	E26,T26,726
7) DOUGLAS & N.W. HWY	25S	E27
1) GARLAND NEAR BUCKNER	38N	E31,T31,BOAT31
2) BENNING & JIM MILLER	48N	F32
3) VERNON & ILLINOIS	54T	E33,SQ33,733
4) LAKE JUNE & BUCKNER	58L	E34,T34,BAT8,734
5) WALNUT HILL NEAR MARSH	24N	F35,BAT7,735
6) HAMPTON & SINGLETON	43M	E36,T36,BAT9
7) GREENVILLE & BLACKWELL	26T	E37,T37,R37,737
8) 2816 E. ILLINOIS	55V	E38,T38,738
9) SHILO & CENTERVILLE	39F	E39
1) ROYAL LN & PRESTON	25F	E41,T41
2) MOCKINGBIRD & LEMMON	34L	E42,SQ42,R42,BOAT42
3) LOMBORDI & DENTON	23T	E43,T43,E43A
4) FRANK & LAGOW	46V	E44,744
5) W.COMMERCE & SYLVAN	44U	E45,745
6) CAMP WISDOM & RLT FRWY	64V	E46,746,E46A,R46
7) ENVOY CT & MOCKINGBIRD	33U	E47,T47,747
8) LULLWATER & N.W. HWY	28W	E48,BAT10,748
9) 4901 S.HAMPTON	63M	E49,T49,CRASH49-REDBIRD AIRPORT
1) ST.AUGUSTINE & SEGOVILLE	59X	E51,E51A
2) COCKRELL HILL & ILLINOIS	53S	E52,BOAT52
3) JOHN WEST & BUCKNER	38X	E53,753
4) 6238 BONNIE VIEW	66U	E54,BOAT54
5) 6600 TRAMMEL	36H	E55
6) BELT LINE & HILLCREST	15H	E56,T56,756
7) AUDELLIA & SKILLMAN	27G	E57,T57

ON EQUIPMENT CALL NUMBERS	
660	FIRE DISPATCHER
700	DIVISION CHIEF-EMERGENCY MEDICAL SERVICES
710	SECTION CHIEF-EMS
720	DUTY OFFICER-EMS
730	EMS SUPPLY DIVISION
740	ADMINISTRATIVE LT.-EMS

DALLAS FIRE DEPT continued

800	CHIEF OF DEPARTMENT
801	ASST CHIEF,FIRE CONTROL AND RESCUE OPER.
802	ASST CHIEF,ADMINISTRATION
803	ASST CHIEF,SPECIAL SERVICES
804	ASST CHIEF,FIRE PREVENTION(FIRE MARSHAL)*
805	DIV CHIEF,ADMINISTRATIVE SERVICES
806	DEPUTY CHIEF,AREA 1,FIRE CONTROL & RESCUE
807	DEPUTY CHIEF,AREA 2,FIRE CONTROL & RESCUE
808	DIV CHIEF,COMMUNICATIONS DIVISION
809	SECTION CHIEF,COMMUNICATIONS DIVISION
810	FIREMAN COUNSELING COORDINATOR
811	FIRE DEPARTMENT PHOTOGRAPHER
812	ASST PHOTOGRAPHER
814 & 815	SHIFT TRAINING OFFICERS
819	SCUBA DIVERS CAR
820	NO. 18 STATION SUPPLY PICK-UP TRUCK
821	AERO UNIT (AIR BOTTLES TRUCK)
822	SAFETY OFFICER
826	ADMINISTRATIVE AID
830	DIV CHIEF,RESEARCH & PLANNING
831	CAPTAIN,RESEARCH & PLANNING
832	CAPTAIN,RESEARCH & PLANNING
833	CAPTAIN,RESEARCH & PLANNING
834	RESEARCH ANALYST
835	SYSTEM ANALYST
836	DISPLAY ARTIST 12
850	DIV CHIEF,MAINTENANCE DIVISION
851	SECTION CHIEF,MANTENANCE DIVISION
852	SHOP SUPPLY TRUCK
853	PARTS SUPPLY TRUCK
854	TIRE TRUCK
855	DUTY MECHANIC
856	DUTY MECHANIC
857	HEAVY WRECKER
858	LIGHT WRECKER
859	PREVENTIVE MAINTENANCE TRUCK
860	SHOP SUPERVISOR
861	MECHANIC SUPERVISOR
869	DUMP TRUCK
870	BUILDING MANAGER
871 & 872	CARPENTER
873 & 874	ELECTRICIAN
875	CENTRAL SUPPLY TRUCK
880	LIAISON OFFICER,COMMUNICATION DIVISION
881	FIRE ALARM ELECTRICIAN
886	RADIO TECHNICIAN
890	CHAPLAIN
896	CANTEIN (MOBIL REFRESHMENTS)
898	COUNTY FIRE MARSHAL
899	ASST COUNTY FIRE MARSHAL
901	DIV CHIEF,ARSON & FIRE INVESTIGATION DIVISION
902	DIV CHIEF,EDUCATION AND INSPECTION DIVISION
903	DIV CHIEF,TRAINING DIVISION
904	PUBLIC INFORMATION REPRESENTATIVE
905	ASST PUBLIC INFO REP
906-908	SECTION CHIEF,TRAINING DIVISION
909-914	CAPTAIN,TRAINING DIVISION
915	CAPTAIN,RECRUITING
916	RECRUITING OFFICER
920	ASST DIV CHIEF,EDUCATION & INSPECTIONS
921	CAPTAIN,EDUCATION & INSPECTIONS
922	LIEUTENANT,EDUCATION & INSPECTIONS
925 & 926	FIRE PREVENTION OFFICERS

City Map Designating DFD Stations and MICU Locations



CHIEF	STAT
1	18
2	22
3	17
4	24
5	25
6	14
7	35
8	34
9	36
10	48

930	CAPTAIN, EDUCATION & INSPECTIONS
931 & 932	LIEUTENANT, EDUCATION & INSPECTIONS
933-936	FIRE PREVENTION OFFICERS
940	CAPTAIN, EDUCATION & INSPECTIONS
941 & 942	LIEUTENANT, EDUCATION & INSPECTIONS
943-948	FIRE PREVENTION OFFICERS
950	CAPTAIN, EDUCATION & INSPECTIONS

951 & 952		LIEUTENANT,EDUCATION & INSPECTIONS
953-965		FIRE PREVENTION OFFICERS
970		ASST DIV CHIEF,ARSON & FIRE INVESTIGATION
971-976		CAPTAIN,ARSON & FIRE INVESTIGATION
977		LIEUTENANT,ARSON & FIRE INVESTIGATION
980		ASST DIV CHIEF,ARSON AND FIRE INVESTIGATION
981-983		CAPTAIN,ARSON AND FIRE INVESTIGATION
984	**	DUTY OFFICER,ARSON AND FIRE INVESTIGATION **
985-987		CAPTAIN,ARSON AND FIRE INVESTIGATION
988		LIEUTENANT,ARSON AND FIRE INVESTIGATION
989		FIRE PREVENTION OFFICER
999		CITY MANAGER

DISTRICT 1	(DOWNTOWN & OAKLAWN AREA)	STA'S 4,11,18
DISTRICT 2	(NORTH DALLAS-EAST AREA)	STA'S 22,37,41,56
DISTRICT 3	(EAST DALLAS-LAKEWOOD AREA)	STA'S 3,8,17,19
DISTRICT 4	(SOUTH DALLAS AREA)	STA'S 6,24,38,44
DISTRICT 5	(SOUTH OAK CLIFF AREA)	STA'S 23,25,33,46,54
DISTRICT 6	(CENTRAL OAK CLIFF AREA)	STA'S 14,15,26,49,52
DISTRICT 7	(NORTH DALLAS-WEST)	STA'S 2,21,27,35,42,43
DISTRICT 8	(PLEASENT GROVE)	STA'S 5,9,32,34,51,53
DISTRICT 9	(WEST DALLAS AREA)	STA'S 1,16,36,45,47
DISTRICT 10	(LAKE HIGHLANDS-WHITE ROCK)	STA'S 31,39,48,55,57

Let's hear a resounding round of applause for the DFW gang for that excellent report!! Absolutely wonderful, guys! But wait! Next month the DFW Chapter will have a report on the city of Fort Worth FD and the Tarrant County fire mutual aid system. Be sure to check in with us next month!

With that it is time to close down the column for this month. As I am putting the finishing touches on this column I find myself with quite a bit of material to publish in the next issue. But don't let that stop you from sending in your report. I just ask that you be patient while awaiting your turn to be published. See you next month.

ILLINOIS, INDIANA, MICHIGAN, WISCONSIN:

Greetings from Oswego (and also from the Chicago Chapter). Spring is starting to make its slow but brief appearance here in this area. (The Chicago area is noted for its very short springtime before the abrupt shift to summer-like weather).

April generally means the coming of the severe weather season around these parts of the country, so I'll summarize the warning systems in use:

1. IL The I.S.P. broadcasts alerts on 42.500. The system is tested every Tues. at 1000 hrs. by the various dists. Occasional random tests have been noted at other times.
2. IN The I.S.P. broadcasts alerts on 42.420 and 155.370. The system is tested every weekday at 1000 hrs. by the various dists.
3. MI Larry (MI-1) advises that no statewide radio system as such is in operation. Best results can be obtained by tuning in to the "Skywarn" radio amateur rptrs. He's listed some of them for eastern and northeastern parts of the state. 146.970=ARROW rptr. (Ann Arbor), 147.330=RADAR rptr. (Dearborn), 146.640=DART rptr (Oak Park), 147.150=SEMARA rptr. (Mt. Clemens), 146.670=TIN LIZZIE rptr. (Mt. Clemens), 147.250=Saginaw rptr., 146.940=Tawas rptr (moved to NW of Tawas City), 146.910 and 147.270=HAINER rptr. (Flint).
4. WI (No data has been received since I've had this column's responsibility. Freqs. to try include WISPERN-155.475, Intersystem-155.370, the 42MHZ state patrol channels, and possibly the 2-meter amateur repeaters).

April also marks the first anniversary of the inclusion of MI in this column-and I've come up with an appropriate story to mark the occasion. More on that a bit later.

WILL COUNTY, IL S.D. EMERGENCY COMMUNICATIONS VAN. Last summer, a mobile emergency communications center was placed into operation. E/W 45 radio freqs. and ohter radio hookups, the center gives the county complete emergency capabilities.

The van can cover and dispatch all P.D.'s and F.D.'s in the county plus several in neighboring counties (including Cook, DuPage, Grundy and Kankakee). Some of the channels available for use include both police intersystem freqs. (39.46 & 155.37), NLEEF-ISPERN (155.475), NIFERN (154.265), Red Cross (47.42), I.S.P. (most likely 42.50), and civil defense-ESDA (both 45.44 and 155.025), MERCI (155.340), and in the future-IREACH (155.055).

Additional capabilities include 15 telephone lines to plug into any "base station", base and mobile CB radios, 2-meter and sideband amateur radios, an aircraft radio, a marine radio, and a mobile telephone. A 40 ft. telescoping antenna services these needs.

(Taken from an article appearing in the "Illinois Sheriff")

Mark (IN-014) has sent in a very detailed contribution about the INDIANAPOLIS AREA. It is broken down as follows:

A. INDIANAPOLIS P.D. Updating the contributions found in the April 1981 column:

F6 460.100 rptr. Investigators
F8 460.150 rptr. Vice/Narcotics/Special Investigations
Codes in use:

1. Officer Needs Help
2. Personal Hygiene
3. Lunch
4. Report to Headquarters
5. Security Check
6. Conference

Signals in use:

1. Call Communications Sgt.
2. Computer Down
3. Call Dispatcher
100. Hold All But Emergency Traffic

B. INDIANAPOLIS DEPT. OF TRANSPORTATION (D.O.T.) In 1970, the city of Indianapolis and Marion County combined their governments in a system called "UNIGOV". So, Indianapolis is actually Marion County and vice versa. Most agencies were combined into a single agency. Exceptions are Indianapolis P.D. and Marion County S.D., city fire and township fire, and schools. One of the combinationstthat did result was the Indianapolis Dept. of Trans. (D.O.T.) which handles the maintainence of all streets and roads in Marion County. 151.055 rptr. (159.12 in ?) is the primary freq. A separate freq. of 453.500 rptr. is also used-snow plows? (Editors note: 453.500 and 458.500 are licensed to the State of IN for use around the Marion County area.)

C. Lastly, a complete story about WISHARD HOSPITAL. Wishard Ambulance Service is the city paramedic and ambulance service. It serves the entire city of Indianapolis within the pre-"UNIGOV" city limits (see previous contribution). The service operates out of Wishard Memorial Hospital (city-owned and operated). Ambulances roam the city while on call - each is assigned a particular district. Unit numbering is as follows:
"Dist.-____" indicates a basic life support ambulance.
"Medic-____" indicates a paramedic ambulance.
The ambulance service uses the following freqs:

MED-1	463.000TX - 468.000RX	Voice & Telemetry
Med-5	463.100TX - 468.100RX	" "
Med-6	463.125TX - 468.125RX	" "
MED-8	463.175TX - 468.175RX	" "
MED-9	462.950TX - 467.950RX	Primary Dispatch
MED-10	462.975TX - 467.975RX	Back Up Dispatch
Ch. 11	155.400 TX-RX	Back Up Dispatch
Ch. 12	155.340 TX-RX	IHERN

(Chs. 11 & 12 are not present in portables).

Wishard Ambulance crews carry 10-channel Motorola MX-360 portables e/w all 10 UHF "MED" channels. Only those listed above are generally used. MED-8 is used by private ambulance cos., volunteer agencies, and township ambulances to contact "Wishard Control". IHERN is also used by these agencies.

"Wishard Control" controls all medical-related radio traffic in the Central IN Emergency Medical Comm. System (C.I.E.M.C.) The following counties are in the system: Marion, Johnson, Boone, Shelby, Hamilton, Morgan, Hancock and Hendricks. In addition to the channels used by "Wishard Ambulance", the following channels are used for voice and telemetry by the suburban counties:

MED-2	463.025TX - 468.025RX	Johnson & Boone
MED-3	463.050TX - 468.050RX	Shelby
MED-4	463.075TX - 468.075RX	Hamilton & Morgan
MED-7	463.150TX - 468.150RX	Hancock & Hendricks
IHERN	155.340TX-RX	All counties.

"Wishard Control" coordinates ambulance-to-hospital traffic and apparently patches the closest hospital on to the correct MED-channel. All ambulances use a mobile rptr. that allows crews to use their portables up to 100 yards away from the ambulance.

Wishard Ambulance Service uses the following codes:

1. Personal Injury Accident
2. Heart Attack
3. Public Injury (on a street)
4. Home Injury
5. C.B. Report of an Injury
6. Sick Person
7. Seizure
8. Unconscious Person
9. Attempted Suicide
10. Burn Victim
11. Overdose
12. Shooting or Cutting
13. Child Abuse

Mark, thank you for a most comprehensive contribution.

WISCONSIN COUNTY HWY. DEPT. FREQ. REVISIONS update of my Dec. 1981 column-courtesy of Tom (WI-006): Kenosha Co. 151.055 out (156.105); Ozaukee Co. 159.105 out (156.075); Waukesha Co. 150.995 out (159.060).

EAU CLAIRE, WI AREA LAW ENFORCEMENT FREQS. From Bob (WI-001):
Eau Claire S.D. units (includes Altoona, Fall Creek, Augusta, and Fairchild PD units)

Ch. 1	Main Dispatch	154.875 out (159.030)
Ch. 2	Eau Claire P.D.	155.130 out (158.970)
Ch. 3	Point-Point	155.370
Ch. 4	WISPERN (NLEEF)	155.475

Eau Claire P.D. units

Ch. 1	Eau Claire S.D.	154.875 out (159.030)
Ch. 2	Main Dispatch	155.130 out (158.970)
Ch. 3	University P.D.	155.085 out (154.115)
Ch. 4	(not yet used?)	155.025?

An additional channel 154.980 out (158.940) is used by the Eau Claire P.D. on Sawdust City Days (Eau Claire's city celebration). Operation is completely portable-including dispatch. The state university P.D. used to be found on 155.085.

MISC. WISCONSIN COUNTY & LOCAL LAW ENFORCEMENT FREQS. Bob (WI-001) did some extensive travelling during the summer and fall of 1981 and came up with the following results:
LaCrosse S.D. new rptr. 155.430 out (155.850)
LaCrosse P.D. new rptr. 155.610 out (154.710)
Rusk D.S. unique setup (a two stage rptr)
154.710 cars to "remote", 155.700 "remote" to base, 155.625 base to cars.
Ashwaubenon P.D. new rptr. 155.595 out (154.830)
Marinette S.D. rptr. 155,535 out (159.030)
Marinette P.D. rptr. 155,580 out (158.790)
Marquette S.D. rptr. 155.190 out (154.830)

Green lake S.D. rptr. 155.490 out (155.850)
Columbia S.D. rptr. 154,875 out (156.030)
Dodge S.D. rptr. 154.785 out (159.030)??
Menominee Indian Reservation Police rptr. 154.815 out (158.970)

MORE MI HIGHWAY MAINTAINENCE FREQS. Larry (MI-001) sent in some corrections to my Dec. column: Oakland County-delete the freqs. shown in the column and add 156.165 rptr. out (??in). Menominee County-delete freqs. shown in the column. (No radio system is believed in use).

Every so often, I try to tackle a big project, and this month is no exception. I've decided to tackle the Michigan State Police. In order to accomplish this, I've gone thru some back Newsletters, some older correspondence on hand, plus some recent correspondence from several members (and former members) around the lower and upper peninsulas. I can augment this with my own experiences. (Monitoring in the state plus a surprise visit to an M.S.P. post).

There's no one better qualified to be of assistance in this project than Michigan's #1 member of RCMA and our recently-elected 1st vice president. Larry Smith really doesn't need an introduction-his newsletter contributions and work stand out.

I had the pleasant opportunity to spend a few days with Larry last summer up at his bayshore "command post". We made a surprise visit to M.S.P. Post 33 in Bad Axe. (Larry returned the visit in early October-just after the election of officers. He had the opportunity to visit I.S.P. Dist. 5 at Joliet).

Onward-with the MICHIGAN STATE POLICE. M.S.P. is made up of 64 posts scattered throughout the state and augmented by 6 teams in the lower part of the state plus one detachment in the upper peninsula. Six crime labs are scattered through the lower part of the state and 1 crime lab services the upper peninsula. The regular state police functions are augmented by a training academy, an investigative services division, and a "secondary complex".

Low band 42MHZ freqs. are the primary means of radio communication. Outside of the Detroit area, 4 channels seem to be utilized. For purposes of identification only, I'll number then Chs. 1 thru 4.
Ch. 1 (Statewide Dispatch) 42.58 base - 42.74 mobiles
Ch. 2 (Statewide Car-Car) 42.58 mobiles. (Can also be in the base-base mode).
Ch. 3 (The "Regional or Spare" Channel). The MSP is divided into 8 "regions". 42.48 is supposedly allocated for "regions" 1/2/5/7. 42.68 is supposedly allocated for "regions" 3/4/6/8. Bases and mobiles will be found here.
Ch. 4 (The Tactical Channel) 42.56 mobiles. This channel is used in some areas for car-car work rather than the 42.58 freq. In some areas of the state, this freq. is regarded as a "closely-kept secret".
The "regional or spare" channel can have a variety of uses such as post-post, car-car, dispatch function (as is actually the case in some areas of the state), and even by aircraft. Some posts reported using 42.48 for dispatch include 26-Upsilanti, 27-Pontiac, 56-Wayland, and 57-Benton Harbor. (Post 57 was monitored by this editor calling "54 units", but official info, received from M.S.P. shows nothing for "54"-which is apparently New Buffalo). Some posts reported using 42.68 for dispatch purposes include 24-New Baltimore and 41-Jackson. 42.68 is also reported in use as a post to Headquarters freq. in the Lansing area.

The Detroit Expressway Post 29 is a noted exception to the above statewide plan. The odd freq. of 42.64 rptr. out (input?) has been observed in use. Other freqs. in use probably include 42.02 base and 42.80 mobiles. Additional freqs. of 42.18/42.24/and 42.30 are licensed for mobile use (one of them may possibly be the input to the 42.64 rptr)., as is a base freq. of 42.94.

Several freqs. in the 39 and 45 MHZ band are also listed. Licenses are issued to the "State of MI". Best results will probably be obtained on

39.14 and 39.82, where KN2801 is assigned to "marine vessels on the Great Lakes". (These freqs. are widely used in the eastern and northern half of the lower peninsula by local and county law enforcement agencies).

Our summer visit to the M.S.P. post revealed the existence of separate radio equip. for liaison with the DNR stations and units operating in the 44MHZ band (see a previous column). This situation is quite common throughout the state.

Let's move on to high band now. Two freqs. stick out prominently for statewide use:
1. 155.370 is the point-point freq. for contact with other posts plus local and county law enforcement agency base stations. Not all M.S.P. posts have this capability (or even high band period) as was determined at our M.S.P. post visit - hence the use of 42.58 as a post-post freq. (Post 52-White Pigeon is not e/w this freq. 42.58 is used to talk to neighboring Indiana State Police at Ligonier - with Ligonier's reply coming on 155.370).
2. 155.865 is the "MEPS" (Michigan Emergency Police System) or statewide emergency freq. Bases and mobiles are found statewide. Base transmitters are located at M.S.P. posts, county SD offices, and even at local P.D.'s (FCC microfiche reveals that many local and county licenses show "power" well in excess of 100 watts and "antenna heights" in excess of 90 ft. for mobile units only. Editor's comments: "Who's folling who!") Remember that not all M.S.P. posts are e/w this freq. So far, no plans are in the making to convert the state of MI over to the NLEEF freq. of 155.475 for emergency purposes.
Other high-band freqs. are used statewide for detective and surveillance purposes. They include 154.665-RED, 154.920-GREEN, 155,460-WHITE, and 155.505-BLUE. Base stations are scattered around the lower part of the state. Mobile units are authorized for F3Y emission (that nasty ole DVP). A mobile-only freq. of 154.905 is also available for statewide detective and surveillance purposes-again with DVP authorized. This last freq. is reported in use in the Grand Rapids/Kalamazoo area for "narcotics purposes".

Three (3) other high band freqs. of note remain:
1. 154.695-licensed for use by low power (2.5 and 10 watt) mobiles. Some statewide bases were authorized, but licenses have expired. (Possible use by portables and/or mobile extenders?).
2. 154.935-Base stations located in the E. Lansing and Inkster (Detroit Metro Airport) areas. Mobiles authorized.
3. 155.475 (NLEEF)-March 81 FCC files show no active licenses at present. Some statewide bases were authorized, but licenses have expired.

M.S.P. units in certain areas are e/w high-band radios. In my travel thru the state last year, I found these cars along I-75, I-69, and I-94 from the Flint-Saginaw area all the way to Stevensville. (The licenses for 154.950/155.535 apply to cars in the Chippewa County area near Sault St. Maire. Licenses for 155.445/156.030 and 155.610/155.850 apply to cars in the Gennessee County area near Flint). I don't doubt that these cars I saw are e/w the "MEPS" freq. of 155.865 and probably the local county(or city) freq. The only other possibility is the presence of portable radios and mobile extenders utilizing the 154.695-42.740 combination. (The trooper would utilize the portable radio on 154.695 which ultimately would activate the car's low band radio on 42.740. That way he's in contact with the post).

Not much is known about M.S.P.'s UHF freqs. Statewide temporary bases are authorized on 460.025/460.075/460.125/460.175/and 460.225. Low-power mobiles (5 and 30 watts) are authorized on the above 460 MHZ freqs. plus the corresponding 465 MHZ freqs.

These radio systems are augmented by CB radios (Ch. 9 in use at posts and Ch. 19 in use in mobiles) and by scanners. (I've seen BC-210's and Optiscans in the mobile units).

ublic Safety Central - continued

A thank you is in order to all the members and former members that provided the necessary input for this detailed project. I'm sure there are corrections and additions-and they are most welcome.

With that detailed look at the Michigan State Police, this month's column draws to a close. Until next month -

Happy Monitoring!!

PUBLIC SAFETY - WEST

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming to: George Hoggatt, 17473 E. 16th Drive, Aurora, CO 80011.

Another Public Safety West. I hope that spring has started by the time you read this as it isn't when I write. It is 6 below.

MORE CROOKS WITH SCANNERS

A drug raid in Denver in late January, netted weapons, several kinds of drugs, a drug lab, and a police scanner. Apparently, the scanner didn't do much good.

In Albuquerque New Mexico, several ex-policemen are under arrest for a number of crimes including armed robbery and murder. These crimes took place in New Mexico, Arizona, Colorado and Texas. One of the prominent features of all of the crimes was that the bad guys always had a portable scanner with them. When arrested, they found scanners and crystals for departments in all the states where crimes had occured.

In Aurora Colorado, there is a scanner owner that isn't a criminal now, but may be if he "chases" another police call. He has been doing this the last few days, always telling the police that he just happened by "on his way to work". They have decided to arrest him the next time this happens.

I hope this is not a trend. Incidents of this type do untold harm to our hobby. They offer good excuses for adding scramblers and enacting laws against scanners.

****

I am out of information. I have used it all with this column. PLEASE send more. One request though, send only data which can be used in this column. Club policey will not permit me to use U S Government information, business information, etc. It's not that I don't want to, but the editors of the columns that are supposed to print this sort of information might be (understandably) mad at me if I did print it. All I can do is collect the information and when there is enough, send it to the proper editor. You can get it in print faster and save me 20 cents by sending it to them directly.

BASE	MOBILE	TYPE	USER	REMARKS	SENT BY
COLORADO					
154.785	?	PP RP	Douglas County	Sheriff Ch. 1	ye editor
155.115	154.965	PL RP	Douglas County	Sheriff Ch. 2 and main chan. for non-police	

155.010	159.030	PP RP	Greenwood Village Police Greenwood Village is no longer on the Arapahoe County Sheriff's system except when inter-department coordination is needed.	ye editor
154.220	?	PF ?	Steamboat Spgs. Fire for Steam- boat Spgs and Hayden departments	ye editor

NOTE: This frequency can be monitored in most of the Denver area, along with several other western slope channels. This is due to a phenomenon know as edge effect. The continental divide and peaks west of Denver act as a "sharp" edge and bend the radio waves.

155.595	La Plata Co. Sheriff (Durango)	David Litsinger
154.710	Southern Ute Tribe Police	(TX-032)

ARIZONA

39.220	Coconino County Sheriff repeater (39.18 in)	David Litsinger (TX-032)
44.66	Arizona Motor Vehicle Dept.	(name withheld)
44.760	Arizona Lands Dept.	(name withheld)
151.250	Arizona Game and Fish region 1 simplex	(name withheld)
151.460	Arizona Game and Fish	(name withheld)
154.710	Chinle - Navajo Tribe Police	(TX-032)
154.740	Prescott County (Jerome) Sheriff repeater	(TX-032)
155.085	Kayenta - Navajo Tribe Local Government	(TX-032)
156.090	Arizona Criminal Investigation	(name withheld)
156.150	Mohave County(Kingman) Sheriff repeater	(TX-032)
453.050	Arizona Technical Communications Dept.	(name withheld)
453.725	Keams Canyon - Hopi Tribe police	(TX-032)

NEVADA

42.940	Clark County Sheriff's Jeep Posse	(TX-032))
151.340	Nevada State Parks	Fred Ritcher (NM-005)
151.475	Nevada Fish and Game	(TX-032))
155.280	Las Vegas Area Flight for Life	
158.940	same	(TX-032))
155.940	McCarran Ops (?)	(NM-005)
158.895	Nevada Division of Forestry	

==========

Fred Ritcher (NM-005), a regular contributor to this column, wants to thank all of those who have contributed Arizona frequencies to the column. He visited Kingman at Christmas, and was able to follow one of those stories that sound more like TV than real life. Without the information in this column, he would not have been able to hear it all.

Bob Gehri, a former editor of this column and a regular contributor has published a new frequency book for the Portland Oregon area.As a general rule, I don't like to use the column to give free advertisments to anyone member or not, but in this case, I'm more than willing to make an exception. Bob sent me a copy with permission to use any of it in the column (and I will). The book covers everything from information for the beginner to city frequencies and maps and codes, to counties to state and Federal Government. The price is $8.95 (no postage or handeling charges) from Police and Fire Frequency Listing, 706 W. 43rd St. , Vancouver, WA. 98660. If you live in the Portland, southwest Washington area or are planning a trip there, it would be a valuble investment.

That's it for this month, SEND DATA! Dave

PUBLIC SAFETY - CALIFORNIA

NEWSFLASH:

PUBLIC SAFETY - CALIFORNIA has a new address;

Public Safety - California
P.O. Box 3962
Santa Fe Springs,
Calif. 90670-1962

April, 1982

From ERIC (CA-LA-045) and MIKE (ID-001):

Howdy. We've got alot to cover this time. Eric, we'll have a good week in Sacto. Blue and Gold.

From RAY (CA-SD-022):Answers to Feb. 1982 issue page 49;
39.38 is an old San Diego Tac or car to car channel used before the mass conversion to VHF high band by most PD's.
158.865 is a former metropolitan San Diego and vicinity inter-city frequency used before the clemars system started (154.92 etc.).
154.295 is a secondary fire dept. statewide mutual aid frequency.
San Diego City and County are both still licensed to use all these freqs although they are inactive and have no regular use at the present time. They may be used for special purposes or may be available for emergency use when needed.

From RON (CA-AL-035); Ron deserves credit for the CHP and CDF maps which have been in past columns. Thanks very much Ron.

From FRED (NM-005): Reference 453.00 usage in Mono County- he has heard a freq mentioned as the "Hotline" which this freq may be.

From GEORGE (NY-164): He is from Groveland, Ca. and is in New York with the U.S. Army. He is looking forward to going home to listen to the following freqs this October.

45.08	Tuolumne Co. Road Dept.	45.42	Tuolumne Co. Sheriff F1
45.92	Tuolumne Co. Schools	45.54	Tuolumne Co. Sheriff F2
46.58	Groveland Community Services	46.02	Tuolumne Co. Sheriff F3
47.50	Sonora Ambulance	160.335	Central Calif. RR
155.40	Sonora Comm. Hosp.	161.325	Modesto & Empire RR
155.295	Sonora Comm. Hosp.	160.59	Sierra Railroad
43.00	Groveland AAA Towing	160.455	Ventura County RR

From MISSY (CA-MR-001); She reports that the CHP in Modesto and Tracy may be using the extenders. A dispatcher told a unit she was having trouble hearing the officer through his extender. Another unit gave up on his extender.
For those that don't know, the CHP is converting over to extenders statewide. These are similar to the ones in last months article on mobile repeaters. The extender frequency is 154.905mhz. So just listen to this and you may hear both sides of the conversation if a mobile unit is close to you. Northern California CHP units are getting them first. There are none in Los Angeles County and farther south yet, but it shouldn't take long now.

From BILL (CA-ME-015): Fire Freqs for Marin and Contra Costa Fire.
Marin County Fire Agencies;
46.50 Southern Marin and Ross Valley Areas
46.28 County of Marin Fire Dept.
46.20 San Rafael Fire Dept.
46.36 Novato Fire Dept.
46.12 Mutual Aid
Contra Costa County Fire Agencies
46.06 Richmond, West County, El Cerrito Fire Depts.
46.10 Mutual Aid
46.32 Contra Costa Consolidated Fire Dept.

46.38 Various Fire Districts Countywide
46.44 San Ramon Valley Fire Dept.
44.64 East Bay Regional Parks Fire Dept.
154.385 Richmond Fire dept., Riverview Fire Dept.

From WILLIAM (CA-LA-464): (high #'s, ed.)
Ref. the corrected LASO listing, F10 is also used by South Bay Regional Public Communications at Redondo Beach (470.8125). For Glendora Police Dept., Code 40-go to ch. 2, 154.92, Code 50-go to ch. 3, 153.86.

From MILTON (CA-SD-025): From news articles concerning the San Diego Police Dept. dispatching on calls.
Priority One- Life threatening situations
Priority Two- Crimes in progress, burglaries and robberies
Priority Three- disturbances involving injuries and fights
Priority Four- a "cold" crime, such as a burglary with no suspects
Priority Five- suspicious cars, calls to contact a citizen, or found property.
San Diego County Sheriff's Dept. has a thirty seven foot bus used to transport a SWAT team and to act as a command post with radios, telephones, closed-circuit television, lighting and a PA system.
Most interesting is one of the monitor radios, a Bearcat 250.
Eureka Police and Fire dispatching has combined as of last Nov. and is being done at the Fire Dept. headquarters to save money.

WALT (CA-OR-129) has some info on Costa Mesa Police Dept. Mobile Computer/RTTY Terminals: Currently only one car is equipped. The terminal features a red plasma display in a light hood with a full keyboard console attached. An extra row of special-function keys allows single keystroke access of any computer tied into the system. Currently, the system is "in-house" only--that is to say that the transmissions go through the Costa Mesa PD Headquarters, rather than Orange County Communications. The regular Micor control heads are mounted on top of the terminal, and the whole thing is mounted on a swivel. Future capability of the system will include: dispatching, "ELECTRONIC MAIL", CLETS, NCIC, EPIC, DMV and interstate DMV info. It is hoped that this system will help ease the burden on the hopelessly over-worked Purple Channel (info channel for all of Orange County). Operating frequency (approx. 500-512mhz) is unknown. (May be presently 460.55 to change to 800mhz, ed.)

STAN (CA-RI-037) notified us that Desert Hot Springs has formed its Police Dept. which began operation late Dec. 1981. Their Freqs. are unknown but it may be a local govt. which it has had for a long time. The County Sheriff no longer provides protection for the city.

JERRY (CA-OR-002) informs us that Orange County Fire Dept. may be changing their system to 800 mhz soon. They will wait a little longer if the Fire Depts. in every city of the county agree to change over with them to have a radio system similar to the PD's.

BOB (CA-OR-058) has new info on Costa Mesa PD computer terminals; All of the PD units are equipped with the terminals and are in use. They are operating on a freq of 460.525 with plans to go to 800 mhz later. Huntington Beach PD is also using the same system and operate on 460. 55 mhz with plans for 800 mhz later. Long Beach PD also has the same syatem and are operating on low band around 49 mhz.

CHP Academy on 42.50mhz. For interesting listening try this freq. on May 17-21 during their field practical problems which the Cadets participate in. This is also used for the towers overlooking the high speed track and for Staff Services (security).

From GERRY (CA-SL-005):

Over the new year holidays I went to Lake Tahoe for a few days and I'd like to pass on some information to those snow-bound RCMA members. Good tire chains, a scanner and a CB radio are essential. Traffic accidents are common and often hold up traffic for hours at a time. Cal Trans is one of the best sources of information. They use 47.04 for snow removal and chains control operations on I-80 from Auburn to Donner Summit. District 3 net on 47.16 is used elsewhere. CHP offices 70-Gold Run, 80-Truckee and 13-Lake Valley (Meyers) use Grey 42.48 BA and 42.68 MO with extensive use of mobile extenders on 154.905 MO

Washoe Co., NV SO patrols the Incline Village area with Incline dispatch on 155.310 RP (156.090 input). NV Highways uses 47.12. NHP operates Ch 1 (Reno) on 42.94 BA paired with Ch 2 on 42.78 MO. 42.78 repeats on 154.695 with excellent coverage, probably a fixed RP to Reno dispatch. Some dispatching also occurs on Ch 4-42.88 BM.

El Dorado Co.'s South Lake Tahoe dispatch is 'Control 12' using 45.30 RP (input 37.22). Mobile extenders are sometimes used on 154.845.

The first CHP mobile extender was installed in San Luis Obispo last month with the other units to be installed in early 1982.

On the weekend on November 28th there was a wildland fire with threatened structures at the EOD area of El Toro, USMC. County Fire used Tac 5 and El Toro used 138.74 and 140.10 for fire and 138.94 for MP's. Excellent copy was obtained copying the image frequency on a BC-250. County Fire used the old ORCO CDF frequency of 151.325 and CDF state net on 151.355 for A/G communications with air tankers.

RENÉ (CA-SC-018) tells us that 154.905 for CHP extenders is being received from San Jose, San Francisco and Oakland and that it is nice to hear both sides of the conversation on one frequency. He mentions that Santa Cruz #26 changed from Green to the Blue in October. It was heard that Monterey and King City were going to change to the Black in 1982. Perhaps they will stay on the Green and Santa Cruz will switch to the Black.
René has heard that the Bay Area Scanner Club may have been discontinued. Can anyone confirm this?
With the release of Bob Grove's new Scanverter which converts all of the 225-400mhz AM freqs. into the 118-136mhz AM aircraft portion of a Bearcat 220RC or JIL SX-200, René will have almost full coverage from 26-514mhz with the exception of 88-108 (FM Radio), 180-216 (VHF TV) and 216-225 (Medical-Telemetry and Amatuer Radio) with his SX-200 scanner.
René has a list of freqs for CHP links in the 72mhz area which will be in next months column as well as 488-489mhz listings for the Bay Area.

David (CA-SF-025) is busy monitoring the Marin County radio system and notes that the County Comm Center talks to local PD's on 39.52. The PD's and Sheriff are loose on codes and use alot of plain English possibly due to most cities hiring part-time minimum wage dispatchers (yet this is the wealthiest county in the state).

From DAN (CA-LA-359):

POLICE DEPARTMENT-City of Los Angeles

While returning from vacation through the Mojave Desert on I-15, I noticed, what appeared to be an unmarked vehicle with a UHF antenna mounted on the right-rear quarter-panel. The vehicle (a 4-door Dodge) had a standard issue California license plate, but no other

markings. Since the radio traffic on the CHP channels were quiet, I decided to use the "search-mode" of my Bearcat 210 scanner to attempt to determine the identity of this mystery vehicle.

At the next rest stop (while my travel companion was stretching her legs), I began looking through my 1980 POLICE CALL books (Volume #8 Nevada, and Volume #9 California) to determine possible agencies on the UHF band who would be operating out in the desert. During this time, I kept receiving broken LAPD messages on the ROVER frequencies (UHF T-band). One message did catch my ear: The RTO (Dispatcher) advised a North Hollywood Division unit that he was transmitting on the ROVER-7 (Rampart Division) frequency.

Upon returning back to the LA area, I again returned to the "search mode" of my scanner, centering on the LAPD ROVER frequencies. BINGO!!! LAPD Valley Bureau has now converted to the ROVER radio system, and the Valley Bureau is now operating the same as the Central Bureau (I never did find out who the mystery vehicle belonged to, or who the 2 men in the suits were). Although there is still some simulcasting on VHF-High Frequency "D" (159.030 MHz), the Valley Bureau ROVER frequencies are as follows (with notes as listed by the Southern California Edition of POLICE CALL - 1981 R):

ROVER CHANNEL	FREQUENCY	NOTES	STATION LOCATION
1	506.7125	R *	#10-West Valley #17-Devonshire
2	506.8875	R **	#9-Van Nuys
3	507.1625	R	#15-North Hollywood #16-Foothill
4	506.5875		Tactical
5	507.2625		Tactical
6	506.8125	***	Tactical (Valley)
7	507.0375	R	#2-Rampart
8	507.0875	R	"Trigger" (Emergency)

NOTES:

R	indicates repeater operation on this frequency
*	POLICE CALL book shows as Van Nuys Division
**	POLICE CALL book shows as Foothill Division
***	several Valley Bureau units have been assigned to ROVER-6 for car-to-car operations. ROVER-4, ROVER-5, and ROVER-6 channels are used by both Central and Valley Bureaus for car-to-car operations and (as with ALL ROVER channels) can be operated on Simplex or Duplex modes.

It appears to me that ROVER-1, ROVER-2, and ROVER-3 frequencies will be assigned for dispatching purposes for each bureau (with West Bureau and South Bureau to follow when ROVER frequencies are assigned) and ROVER frequencies 4 through 8 (except ROVER-7 which Rampart Division is assigned) will be used for tactical purposes. Refer to the August 1981 Newsletter (page 58) for the Central Bureau listing.

SANTA CLARA COUNTY
From RON (CA-AL-035)

Sheriff

156.21	F1	KMA376	Dispatch	"Control 1"
156.15	F3	KMA376	Detectives	"Control 3"
154.875	F5	KMA376	Detectives, car to car	"Control 5"
155.7	F6	KMA376	car to car	"Control 6"

155.19 ?	F7		Detectives ?
156.45	F11	KA3002	Detectives, surveillance "Control 11"
39.92	F17	KMA376	Civil Division, some mountain areas
155.07			S.F. Bay Area coordination channel
155.415 r		KEX309	4 county net (Monterey, San Benito, Santa Clara, Santa Cruz) 45.9 in
154.92			CLEMARS, car to car
482.3375		KWM757	City-County net (used as a secondary & coordination channel by police agencies in the county operating in the UHF-T band: Campbell, Los Altos, Los Gatos, Milpitas, Mountain View, Sunnyvale)

Fire

154.145		KMB884	Primary Dispatch, south county
154.25	F2	KMB884	Primary Dispatch, north county
154.4	F8	KMB884	Primary Dispatch, northwest county
154.28	F14	KMB884	Statewide Mutual Aid (white channel)

Medical

453.1		KLI983	Ambulance & Coroner "Control 9"
460.525		KYI817	Paramedics
460.55		KYI817	Paramedics

Local Government

151.055 r		KML737	Highway Maintenance "Control 4"
159.00		KE5263	Control 4 input
155.145		KIK965	Public Works
158.82 r		KEX294	County Communications "Control 10"
155.76		KNE24	Control 10 input
155.985 r		KLD878	County Schools & Public Defender "Control 18"
158.955		KJP47	Control 18 input
453.925		KMK916	Health Dept. & Animal Control "Control 15"
453.575		KTK700	San Jose Airport P.D.
151.145 r		KMJ840	County Parks "Control 12"
44.84		KD8007	Control 12 input

Transit District

488.6375	F1	KVZ588	Dispatch
488.6875	F2	KVZ588	Maintenance
488.8375	F3	KVZ588	Dispatch
489.0375	F5	KVZ588	Dispatch

From CRAIG (CA-VE-011):

INGLEWOOD FIRE DEPARTMENT

F1 - 154.175 KMF670 "Inglewood"
F2 - 154.13 "South Bay"
F3 - 154.355 "Tac" (Fireground)
F4 - 154.28 "White"

Station 1 - 141 Regent (Headquarters)
Engine 1, Truck 1, Rescue 1
Unit 10 (Chief Engineer)
Unit 11 (Battalion Chief)
Unit 12 (Division Chief)
Unit 15 (Training)
Unit 25 (Arson Investigation)
Unit 25X(Ordnance Disposal)
Station 2 - 810 S. Centinela Avenue
Engine 2

From CRAIG (CA-VE-011):

Station 3 - 9001 S. Crenshaw Blvd.
Engine 3, Rescue 3
Station 4 - 10701 S. Crenshaw Blvd.
Engine 4, Rescue 4

TORRANCE FIRE DEPARTMENT

F1 - 154.13 KMF440 "Red" "Torrance"
F2 - 154.28 "White"
F3 - 155.10 "Blue" (Shared w/PD)

Station 1 - 1701 Crenshaw
Engine 1, Engine 7, Rescue 1, Truck 1,
Platoon Commander (Battalion Chief)
Station 2 - 25135 Douglas Way (Airport)
Engine 2 (Doubles as Crash)
Station 3 - 3535 W. 182nd Street
Engine 3, Engine 33, Rescue 3
Station 4 - 5205 Calle Mayor
Engine 4, Rescue 4
Station 5 - 3940 Del Amo Blvd.
Engine 5, Truck 5

SOUTH BAY FIRE COMMUNICATIONS

F1 - 154.13 KDW493 "South Bay" (Transmitter site
F2 - 154.355 "Tac" South Bay Hospital)

Hermosa Beach Fire Department

Station 1 - 540 Pier Avenue
Engine 1, Rescue 1

Manhattan Beach Fire Department

Station 1 - 400 15th Street
Engine 1, Rescue 1, Chief 1
Station 2 - 1400 Manhattan Beach Blvd.
Engine 2

El Segundo Fire Department

Station 1 - 348 Main
Engine 1, Engine 3, Truck 1,
Rescue 1, Platoon Commander (BC)
Station 2 - El Segundo Blvd. at Nash
Engine 2 (Squrt), Squad 1

Hawthorne Fire Department

Station 1 - 4400 El Segundo Blvd.
Engine 1, Rescue 1, Truck 1,
Platoon Commander (Battalion Chief)
Station 2 - Crenshaw at 120th Street (Airport)
Engine 2, Squad 1 (Crash Rescue)
Station 3 - Rosecrans at Isis
Engine 3

Redondo Beach Fire Department

Station 1 - 401 S, Broadway
Engine 1, Engine 3, Rescue 1, Truck 1,
Platoon Commander (Battalion Chief)
Station 2 - Grant at MacKay
Engine 2, Engine 4, Rescue 2,
Fireboat 2 (King Harbor)

Palos Verdes Estates Fire Department

Station 1 - Malaga Cove Plaza
Engine 1, Engine 2, Rescue 1,
Utility 1, Platoon Commander (BC)

Gardena Fire Department

Station 1 - Western at 166th Street
Engine 1, Rescue 1, Truck 1,
Utility 1, Platoon Commander (BC)
Station 2 - 135th Street at Van Ness
Engine 2, Utility 2

Note: Although Torrance is on the same frequency and in close proximity, it is not dispatched by "South Bay". "South Bay" has a back up transmitter site located in Palos Verdes on Punta Point also.

MONTEBELLO FIRE DEPARTMENT (Downey Dispatch)

Station 1 - 600 N. Montebello
Engine 51, Truck 511, Rescue 541,
Battalion 504

Station 2 - 1166 S. Greenwood
Engine 52

Station 3 - 2950 Via Acosta
Engine 53

DOWNEY FIRE DEPARTMENT

F1 - 154.25 WQN826 "Dispatch"
F2 - 154.28 KML701 "White"

Station 1 - 12222 Paramount Blvd.
Engine 61, Snorkel 611, Rescue 641,
Battalion 604, Utility 628, 629

Station 2 - 9556 Imperial Highway
Engine 62

Station 3 - 9900 Paramount Blvd.
Engine 63

Station 4 - 9349 Florence
Engine 64

SANTA FE SPRINGS FIRE DEPARTMENT (Downey Dispatch)

Station 1 - 11300 Greenstone
Engine 81, Truck 811, Battalion 804

Station 2 - 8634 Dice Road
Engine 82

Station 3 - 15517 Carminita
Engine 83

Station 4 - 11736 Telegraph
Engine 84, Rescue 841

VERNON FIRE DEPARTMENT

F1 - 154.25 KMC214 "Vernon"
F2 - 154.28 "White"

Station 1 - 3375 Fruitland
Engine 1, Engine 11, Truck 1, Battalion

Station 2 - 4301 Santa Fe
Engine 2, Engine 22, Truck 2

Station 3 - 2800 Soto
Engine 3, Rescue 22

Station 4 - 4530 Bandini
Engine 4, Engine 24

LYNWOOD FIRE DEPARTMENT (Downey Dispatch)

Station 1 - 3161 Imperial Highway
Engine 31, Truck 311, Rescue 341

Station 2 - 4264 Century Blvd.
Engine 32

COMPTON FIRE DEPARTMENT

F1 - 154.25 KMF467 "Compton"
F2 - 154.28 "White"

Station 1 - 201 S. Acacia Avenue
Engine 41, Snorkel 411, Rescue 441,
Battalion 404

Station 2 - 1320 E. Palmer
Engine 42

Station 3 - 1133 W. Rosecrans
Engine 43

Station 4 - 950 W. Walnut
Engine 44

SAN FRANCISCO POLICE CODES

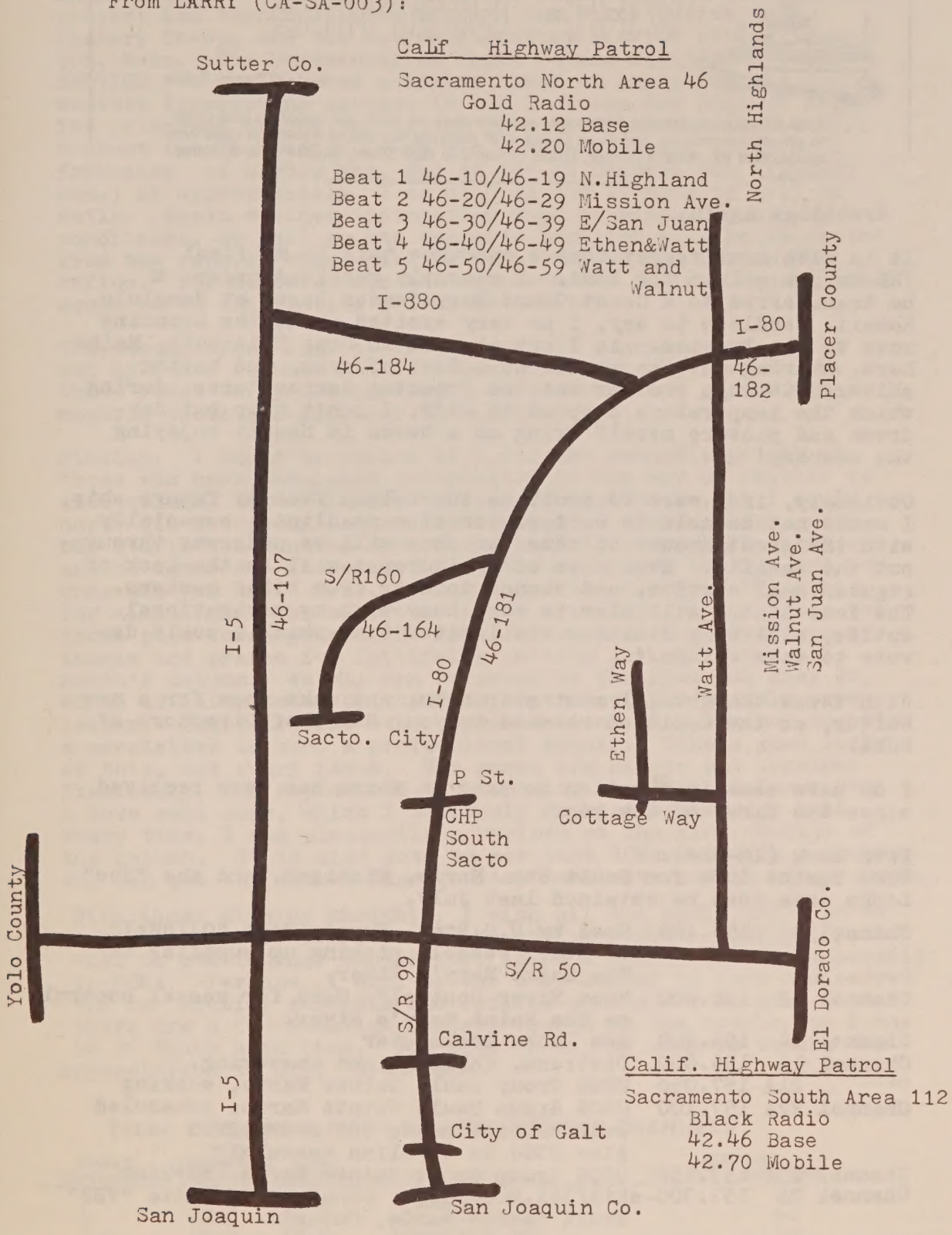
From GERRY (CA-SL-005)

10-1	Receiving poorly
10-2	Receiving well
10-4	Message received
10-7	Out of service
10-7m	Out of service meal
10-8	In service
10-9	Repeat message
10-13	Advice of condition at scene
10-20	Report location
10-22	Cancel last asignment
10-23	Stand-by
10-29	Check for wants
10-30	Check person/auto for wants
10-31	No record/no wants
10-32	Person/auto clear
10-34	Check for wants
10-96	Leaving car for investion
10-97	Arrived at scene
10-98	Changing location
102	Drunk driver
212	Strongarm
213	Pursesnatch
217	Shooting
219	Knifing
221	Man with a gun
400	Evacation
404	Riot
405	Citizen with prisoner
406	Officer needs help
407	Send patrol wagon
408	Send ambulance
409	Send tow car
410	Assistance on way
417	Man ringing doorbells
418	Fight (incl family)
419	Serious disturbance
420	Juvenile distrubance
518	Auto accident - Property damage
519	Auto accident - persons injured
520	Accident - not auto
527	Bonfire
528	Fire
529	Explosion
586	Traffic congestion
587	Tag improp park auto
596	Abandoned auto
600	Roadblock
602	Man breaking in
603	Prowler
800	Alleged insane
801	Attemped suicide
802	Coroner's case
805	Juvenile complaint
811	Drunk case
819	Drunk rolling
851	Stolen auto
852	Tampering with auto
901	Telephone to _____
902	Return to station
903	Close call box at _____
904	Meet an officer
909	See citizen
911	Broken window
912	Person dumping rubbish
913	Nature of complaint unkown
914	Person down
916	Investagate susp. men in vehicle
918	Person calling for help
1000	Airplane crash
2000	Prison break
3000	Blockade at _____ area.

FRANCIS (NV-012) has additional codes.

10-7g	Out of service-garage
10-7r	Out of service-Radio Shop
10-7s	Out of service-station relief
10-7t	Out of service-traffic control
10-8f	In service-Foot patrol
10-25	Respond as backup
10-30	Person/Vehicle is wanted/stolen
10-31	Has record but not wanted
10-35	Consent to search
10-36	Emergency notification
10-43	Of interest to Intelligence Bureau
100	Alarm
400	Demonstrations/Pickets
531	Explosive device found
799	Senile person
805	Juvenile beyond control
807	Missing juvenile
809	Missing person
853	Recovered Vehicle
910	Check welfare of person
4000	Evacuation, mobilization
7000	Use of chemical agents imminent

From LARRY (CA-SA-003):



VHF Marine

Rod O'Connor, Editor

Send information, articles, frequencies and how they are used, and questions that relate to private, commercial, and Coast Guard VHF maritime and inland waterways radio communications to: Rod O'Connor, USCG Group, 259 High Street, South Portland, Maine 04106.

Greetings again,

It is with some regret that I announce this is my final VHF-Marine column for RCMA. I recently received orders to be transferred to a Coast Guard Buoy-Tender based at Honolulu, Hawaii. Needless to say, I am very excited about the upcoming move to the tropics. As I sit at home in Cape Elizabeth, Maine here, staring out the window at a foot of snow, and having shivered through another week of freezing temperatures, during which the temperature dropped to -13F, I can't help but daydream and picture myself lying on a beach in Hawaii enjoying the scenery!

Obviously, if I were to continue the column from my future ship, I would not be able to meet publication deadlines, especially with the great amount of time the ship will be underway throughout the Pacific. Even more of a hindrance will be the lack of regular mail service, and chance to hear from other members. The fact that I will also be very busy with my navigational duties, will only diminish the limited time which I could devote to this column.

With those thoughts, I must step down, and make room for a new editor, or the decision reached by your Board of Directors of RCMA.

I do have some information to pass on which has been received since the first of the year.

from Mark (IN-014):
Some Marine Info for Sault Ste. Marie, Michigan, and the "Soo" Locks area that he obtained last July.

Channel 8	156.400	Used by U.S.Steel Supply Boat "OJIBWAY" to other vessels picking up supplies in The Saint Mary's River.
Channel 12	156.600	"Soo River Control" Used for vessel control on the Saint Mary's River.
Channel 14	156.700	Soo Locks Lockmaster
Channel 16	156.800	Distress, Calling, and answering.
Channel 21A	157.050	USCG Group Sault Sainte Marie, working
Channel 22A	157.100	USCG Group Sault Sainte Marie, Scheduled Weather Broadcasts (ON every EVEN hour) Also USCG to civilian vessels.
Channel 23A	157.150	USCG Group Sault Sainte Marie, working.
Channel 26	157.300-ship/161.900-shore	Canadian CG Radio "VBB" Sault Sainte Marie, Ontario

According to Mark, the best frequencies to monitor for ship movement through the Saint Mary's River are VHF Channels 12, 14, and 16 with the ability to go to other channels as needed. Also in use are the many ship-to-ship frequencies. Most commonly used are Channels 6 and 13 on the river.

According to the Sept/Oct 1981 issue of the University of Rhode Island's Commercial Fisheries Newsletter, a co-operative project has been initiated between the Point Judith, R.I. Fishery Co-op, and the National Weather Service office in Boston, Mass. The University of Rhode Island MARINE ADVISORY SERVICE has implemented a system aimed at improving the marine weather forecasting service in the Southern New England area. The principal behind the system is that fishermen at sea will contact the Pt. Judith Co-op via single-sideband radio on a frequency of 4125.0 khz, and on VHF-FM Channel 80A (157.025 mhz.) at approximately 7 to 8:15 AM and 12 noon to 1:15 PM daily. Basic weather information such as winds, seas, sky conditions, as well as the vessel's location will be requested from the report, which will be furnished to the Boston NWS office. For members near the Southern New England coast, this could be an interesting set-up to monitor.

The accompanying list of frequencies is a good way to close out my final column. It is one of the best received in the three years of my being editor, and I thank one of our new members Scott (IL-198) for furnishing it.

Finally, I would be remiss if I did not acknowledge all of those who have furnished information in one way or another to this column. It would not be fair to list names, as I could never fit everybody's name in the limited space. Also, when one starts mentionning names, somebody is bound to be left out, and be ignored. Therefore, I extend my thanks to all, and you know who you are. Also, I must thank the Board of Directors, for allowing me the opportunity and privelege to be editor for these past three years. The Newsletter staff also deserves my thanks and praise for faithfully cutting and editting each month's column. We all can be proud of the fine job they do, which is illustrated by the fine content of the monthly newsletter. There are few other organizations that can put together a newsletter in such a professional manner. Take a good look at this, and every issue. The pages are always put together flawlessly, and reproduced with amazing results. A few times I have sent copy, which I seriously doubted would copy well. Every time, I was pleasantly surprised at the fine quality of the column. It is also good to see that RCMA utilizes a printer who can put out such a fine quality newsletter month after month.

With those closing thoughts, I wish all the best, and hope to contribute a few comments in the coming months. Naturally, I will be continuing, what I hope to be a fairly active membership in RCMA. Perhaps, I will be the only member to have monitorred VHF on Arctic, Atlantic and Pacific coasts. I do note that there are a few Hawaiian members listed in the totals, so I may be in touch with them. But once again, my sincere thanks and appreciation to all. Good Luck.

VHF-FM MARINE RADIOTELEPHONE CHANNELS

CHANNEL DESIGNATIONS	SHIP FREQUENCIES, (MHz) TRANSMIT	RECEIVE	TYPE OF TRAFFIC	FUNCTION SHIP/SHIP	SHIP/SHORE
1	156.05	160.65	International Only	-	Yes
2	156.1	160.7	International Only	-	Yes
3	156.15	160.75	International Only	-	Yes
4	156.2	160.8	International Only	-	Yes
5	156.25	160.85	International Only	-	Yes
6	156.3	-	SAFETY	Yes	No
7	156.35	160.95	International Only	-	Yes
7A	156.35	156.35	Commercial	Yes	Yes
8	156.4	-	Commercial	Yes	No
9	156.45	156.45	Commercial	Yes	Yes

9	156.45	156.45	Noncommercial	No	Yes
10	156.5	156.5	Commercial	Yes	Yes
11	156.55	156.55	Commercial	Yes	Yes
12	156.6	156.6	Port Operations, USCG	Yes	Yes
13	156.65	156.65	Locks, Canals, Pilots	Yes	Yes
14	156.7	156.7	Port Operations, USCG	Yes	Yes
15	-	156.75	Environ, Hydrographic	Ship receive only	Ship receive only
16	156.8	156.8	DISTRESS-CALLING	Yes	DISTRESS-CALL
17	156.85	156.85	State Control Restricted	No	Yes
18	156.9	161.5	International Only	Yes	Yes
18A	156.9	156.9	Commercial	Yes	Yes
19	156.95	161.55	International Only	Yes	Yes
19A	156.95	156.95	Commercial	Yes	Yes
20	157.0	161.6	Port Operations	Yes	Yes
21	157.05	161.65	International Only	-	Yes
21CG	157.05	157.05	USCG Restricted	Yes	Yes
22	157.1	161.7	Coast Guard	Yes	Yes
22CG	157.1	157.1	USCG Restricted	Yes	Yes
23	157.15	161.75	International Only	-	Yes
23CG	157.15	157.15	USCG Restricted	Yes	Yes
24	157.2	161.8	Public Corresp.	No	Yes
25	157.25	161.85	Public Corresp.	No	Yes
26	157.3	161.9	Public Corresp.	No	Yes
27	157.35	161.95	Public Corresp.	No	Yes
28	157.4	162.0	Public Corresp.	No	Yes
60	156.025	160.625	International Only	Yes	Yes
61	156.075	160.675	International Only	Yes	Yes
62	156.125	160.725	International Only	Yes	Yes
63	156.175	160.775	International Only	Yes	Yes
64	156.225	160.825	International Only	Yes	Yes
65	156.275	160.875	International Only	Yes	Yes
65A	156.275	156.275	Port Operations	Yes	Yes
66	156.325	160.925	International Only	Yes	Yes
66A	156.325	156.325	Port Operations	Yes	Yes
67	156.375		Commercial	Yes	No
68	156.425	156.425	Noncommercial	Yes	Yes
69	156.475	156.475	Noncommercial	No	Yes
70	156.525	-	Noncommercial	Yes	No
71	156.575	156.575	Noncommercial	No	Yes
72	156.625	-	Noncommercial	Yes	No
73	156.675	156.675	Port Operations	Yes	Yes
74	156.725	156.725	Port Operations	Yes	Yes
75	GUARD CHANNEL		-	-	-
76	GUARD CHANNEL		-	-	-
77	156.875		Commercial	Yes	No
78	156.925	161.525	International Only	Yes	Yes
78A	156.925	156.925	Noncommercial	No	Yes
79	156.975	161.575	International Only	Yes	Yes
79A	156.975	156.975	Commercial	Yes	Yes
80	157.025	161.625	International Only	Yes	Yes
80A	157.025	157.025	Commercial	Yes	Yes
81	157.075	161.675	International Only	-	Yes
82	157.125	161.725	International Only	-	Yes
83	157.175	161.775	International Only	-	Yes
83CG	157.175	157.175	USCG,Aux. Only	Yes	Yes
84	157.225	161.825	Public Corresp.	No	Yes
85	157.275	161.875	Public Corresp.	No	Yes
86	157.325	161.925	Public Corresp.	No	Yes
87	157.375	161.975	Public Corresp.	No	Yes
88	157.425	162.025	International Only	Yes	Yes
88A	157.425		Commercial	Yes	No

NEW MEMBERS LIST

AL 020 PHILLIPS, GARY O;5723 BELMONT PL;IRONDALE, AL 35210
AR 018 HAYS, ROBERT EARL;816 WEST COOK;EL DORADO, AR 71730
CACC019 BISHOP, EMMET A;59 ROBINSON AVE;PITTSBURG, CA 94565
CAED007 HODGE, RUSTY;P.O. BOX 954;ORANGE, CA 92666
CALA475 BARCLAY, TOM;8400 NAYLOR;LOS ANGELES, CA 90045
CALA476 PETERSEN, RUSSELL R;10775 ARABELLA PL;CERRITOS, CA 90701
CALA477 FOSTER, DONALD H.;5656 CLARA #11;BELL GARDENS, CA 90201
CALA478 HARRISON, ADAM;23341 BESSEMER ST;WOODLAND HILLS, CA 91367
CALA479 BRONSTON ELECTRIC SERVICE;3715 W JEFFERSON BLVD;
LOS ANGELES, CA 90016

CALA480 MORGAN, ROBERT W;225A E VALENCIA;BURBANK, CA 91502
CAOR230 BUXTON, RANDY;1634 E ARBUTUS AV;ANAHEIM, CA 92805
CAOR231 INGWERSON, RICHARD H.;6572 WESTPARK PL ≠A;
WESTMINSTER, CA 92683
CAOR232 TABOAS, ALEX;7484 FILLMORE DR;BUENA PARK, CA 90620
CAOR233 DAVIS, WALTER;2604 N TUSTIN ≠F;SANTA ANA, CA 92705
CAOR234 TODD, KEN;425 W. ORANGETHORPE;FULLERTON, CA 92632
CARI044 DELMER, JAMES F;P.O. BOX 32;NORCO, CA 91769
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CASB047 MCKINNEY, DONALD;11050 BRYANT ST SP 173;YUCAIPA, CA 92399
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CT 061 DISESA, WILLIAM H;868 STILLWATER ROAD;STAMFORD, CT 06902
CT 062 O'BERNIER, WALTER E;54 GATES AVE;WATERBURY, CT 06705
DE 012 PURSE, WAYNE S;839 PARKSIDE BLVD;CLAYMONT, DE 19703
FL 143 NOONEY, REGGIE;9907 N TRASK;TAMPA, FL 33624
FL 144 SHEA, CARL;P.O. BOX 87;EATON PARK, FL 33840
FL 145 LANGLEY, WADE C;8425 SW 148 DR;MIAMI, FL 33158
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IL 227 SMITHBERG, RONALD;304 MARBLE ST;JOLIET, IL 60435
IL 228 DAVIS, E. JAMES JR;10207 W CHESTNUT AVE;
FRANKLIN PARK, IL 60131
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IN 063 BURGESS, ALAN J;P.O. BOX 3200;MUNSTER, IN 46321
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LA 032 WILLIAMS, VANCE;P.O. BOX 2021;MORGAN CITY, LA 70501
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MA 112 LOZIER, LEON;16 ARTHUR AVE;ATHOL, MA 01331
MA 113 JOHNSTON, MARK D;8 WILSON ROAD;LEXINGTON, MA 02173
MA 114 READ, ROBERT L;7 OAKLAND ST;NANTUCK, MA 01760
MD 059 SMOLINSKI, CHRIS;40 SOUTH LAKE WAY;REISTERSTOWN, MD 21130
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MI 111 ORLOWSKI, JAMES;P.O. BOX 42;TRUFANT, MI 49347
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MO 069 BEEBE, ROBERT E;8145 WHITBURN DR;ST LOUIS, MO 63105
MO 070 TONGE, TIMOTHY;2117 D MILLBROOK CT;JEFFERSON CITY, MO 65101
MO 071 WATTS, RICHARD;14499 ROCKYPOINT DR;ST LOUIS, MO 63034
MS 020 POLSGROVE, WILLIAM;YT-7 POWERPLANTS;NAS MERIDAN, MS 39301
NC 042 HEDGE, GARY;3526 JOHNSON ST;HIGH POINT, NC 27260
NC 043 TORRENCE, LARRY E;806 N FULTON ST;SALISBURY, NC 28144
NJ 150 PARKER, DAVID S;99-A BIRCH ROAD;CEDAR GROVE, NJ 07009
NJ 151 STOREY, B.J.;37 MYRTLE DRIVE;MANAHAWKIN, NJ 08050
NY 203 AMMIRATI, SAL;75 PINE ST;BKLYN, NY 11208
NY 204 JURGENS, PAUL W;229 N CORONA AVE;VALLEY STREAM, NY 11580
NY 205 MILLER, PAUL H;361 TRACEY LANE;GRAND ISLAND, NY 14072
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OR 054 CROOKHAM, K.C.;2831 N.E. 45TH ST;PORTLAND, OR 97213
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PA 160 DOUGHERTY, PATRICK J;7121 MICHIGAN AVE;PITTSBURGH, PA 15218
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PA 162 ALGERI, WILLIAM A;232 CRESTON DR;WEST MIFFLIN, PA 15122

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SC   017   CONANT, DR RICHARD;2716 DIANE DRIVE;COLUMBIA, SC 29210
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TX   113   GASSELS, WILLIAM M;1135 BERKLEY;DALLAS, TX 75224
UT   013   LUNT, JOHN M;850 W MAIN;LEHI, UT 84043
UT   014   WELLMAN, JERRY E;840 E 6TH AVE;SALT LAKE CITY, UT 84103
VA   065   BROWN, LESTER H;3A AUBURN COURT;ALEXANDRIA, VA 22305
SWED003   NILSSON, LARS;MOSSTIGEN 41;87100 HARNOSAND, SWEDEN
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ANNOUNCEMENTS

The R.C.M.A. Board is taking this opportunity to answer the many letters of inquiry we have had on the following topics.

MEMBERSHIP CARDS AND BADGES

The R.C.M.A. has no badges, decals, or membership cards for sale or distribution. The label on your newsletter is your membership card. Other clubs may have several gimmics or commercial good deals. Our good deal is the newsletter, which you as members get to write.

MEMBERSHIP RENEWAL DATE

The date printed by your membership number on your label shows the last month of your current membership. You should renew by this date to insure continuous reception of the newsletter.

Several misunderstandings have occurred due to the fact the newsletter we mail this month is carrying a cover date of next month. The advanced date is used to allow USPS to deliver your newsletter to you on time. Your letter is mailed approximately four days after the monthly board meetings.

PRORATED MEMBERSHIPS

To save postage and other complications, if your original membership application was not accompanied by the correct amount. You received a prorated membership label of less than 12 months. Please do not send in the extra amount to finish the year, just renew when your prorated date comes up.

SPECIAL FREQUENCY REQUESTS

Contact your local R.C.M.A. group for frequencies in your area or use the contact column of the newsletter. We are not yet set up for a national distribution of frequencies. We have discussed this possibility, but the current logistics of the newsletter has stopped us. Ultimately the big picture would include copies of the F.C.C. and I.R.A.C. data bases, a fast computer, and software to select and sort in any order. e.g. Frequencies along route 66 from Chicago to Tulsa in order of the cities passed. Should anyone want to bluesky on this announce your intentions in the Contact Column. We will get there. The Auto Club can plan a road trip, we should be able to give you a frequency map someday....

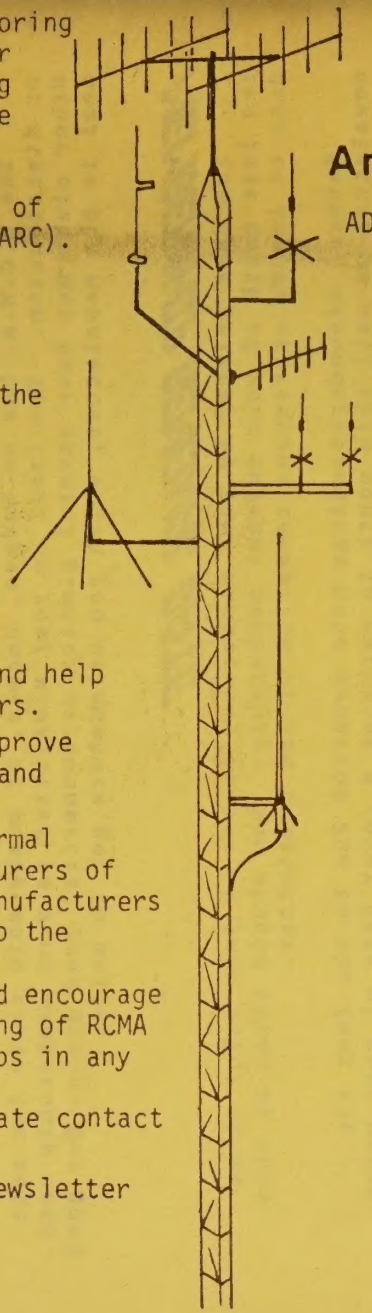
MATERIAL FOR EDITORS

Please send frequency reports and comments directly to the appropriate editor. Until we get the big data base system, the use of a central distribution P.O. Box for everything has lots of delays.

The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications above 30 MHz as a hobby. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).

The goals of RCMA are:

1) To provide a fraternity for those who seriously pursue the hobby of monitor radio listening.
2) To try to be knowledgeable about two-way radio systems and operations.
3) To promote an understanding of the legal and ethical uses of monitor receivers.
4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
8) To encourage and to facilitate contact between members.
9) To publish a regular club newsletter devoted to the hobby.



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